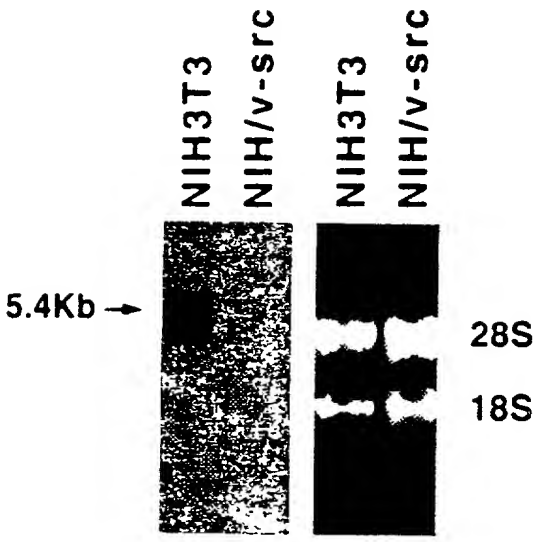


FIG.1

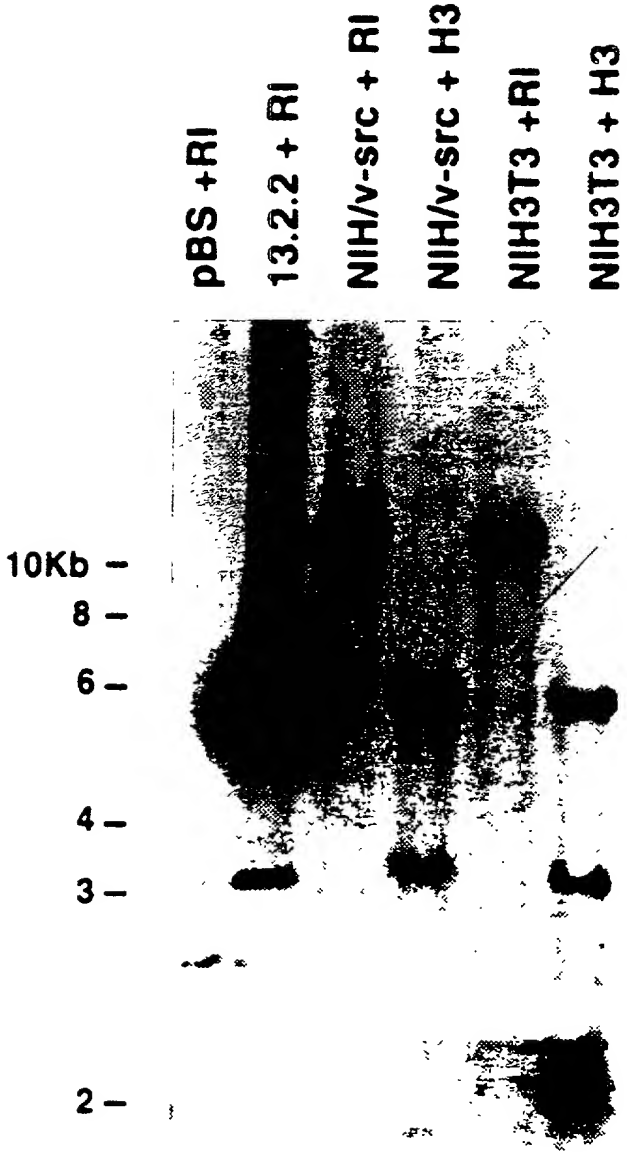

pBS +RI
13.2.2 + RI
NIH/v-src + RI
NIH/v-src + H3
NIH3T3 +RI
NIH3T3 + H3
10Kb
8
6
4
3
2

FIG.2A

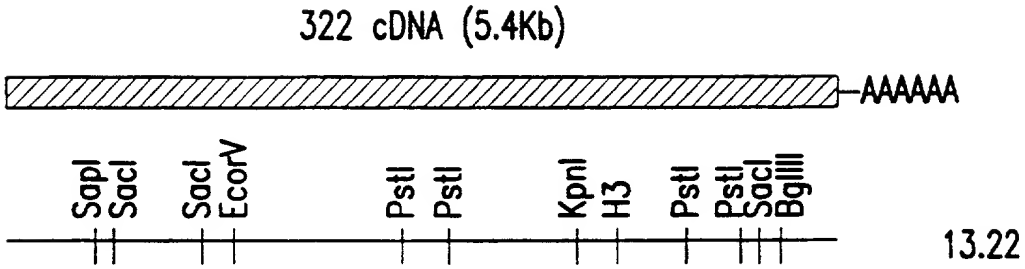

322 cDNA (5.4Kb)
AAAAAA
SapI
SacI
SacI
EcorV
PstI
PstI
KpnI
H3
PstI
PstI
SacI
BglII
13.22

FIG.2B

```
       ggaaaagacagagccagcctcggaggagcaggagccggcagaagacacagaccaggccag    60
       gttgtcagcagactacgagaaggtggagctgcctttggaagaccaggttggtgacctgga   120
       ggcatcgtcagaggagaagtgtgctcctttggcaacggaagtgtttgatgagaagatgga   180
                                                                 M  E     2

181    agcccaccaagaagttgttgcagaggtccacgtgagcaccgtggagaagacagaggagga   240
3       A  H  Q  E  V  V  A  E  V  E  V  S  T  V  E  K  T  E  E  E     22

241    gcagggaggaggaggagaggctgaagggggcgtggtggtagaaggaacaggagaatcctt   300
23      Q  G  G  G  G  E  A  E  G  G  V  V  V  E  G  I  G  E  S  L     42

301    gcccccctgagaaactggctgagccccaggaggtcccccaggaagctgagcctgctgagga   360
43      P  P  E  K  I  A  E  P  Q  E  V  P  Q  E  A  E  P  A  E  E     62

361    gctgatgaagagcagagagatgtgtgtctctggaggagaccacactcaactgacagacct   420
63      I  M  K  S  R  E  M  C  V  E  G  G  D  H  T  Q  L  T  D  L     82

421    aagtcctgaagagaagacgctgcccaaacacccagaaggcattgtcagtgaggtggagat   480
83      S  P  E  E  K  T  L  P  K  H  P  E  G  I  V  S  E  V  E  M    102

481    gctgtcctctcaggaaagaatcaaggtacagggaagtcccttgaagaaactcttcagtag   540
103     L  S  S  Q  E  R  I  K  V  Q  G  S  P  L  K  K  L  F  S  S    122

541    ctcaggcttaaagaagctgtctgggaagaagcagaaggggaaacgaggaggtgggggaga   600
123     S  G  L  K  K  L  S  G  K  K  Q  K  G  K  R  G  G  G  G  D    142

601    cgaagagcctggagaataccaacacattcacaccgaatccccagagagtgctgatgagca   660
143     E  E  P  G  E  Y  Q  H  I  H  T  E  S  P  E  S  A  D  E  Q    162
```

FIG.3A

```
661   gaagggagagagctctgcgtcgtcccccgaggagcctgaggagaccacgtgtctggagaa   720
163    K  G  E  S  S  A  S  S  P  E  E  P  E  E  I  I  C  L  E  K    182

721   agggccgctggaagcacccaggatggggaagctgaggaaggaactacttcgtggagagaa   780
183    G  P  L  E  A  P  R  M  G  K  L  R  K  E  L  L  R  G  E  K    202

781   gaagaggaaggatcactccctgggcatccttcaaaaagatggtgacacccaagaaacggt   840
203    K  R  K  D  H  S  L  G  I  L  Q  K  D  G  D  I  Q  E  T  V    222

841   ccgaagaccttctgagagtgacaaggaggaagagctggagaaggtcaagagcgccacctt   900
223    R  R  P  S  F  S  D  K  F  E  E  L  F  K  V  K  S  A  I  L    242

901   gtcctccactgatagcacagtgtcagaaatgcaagatgaagtcaaaactgttggtgagga   960
243    S  S  T  D  S  T  V  S  E  M  Q  D  E  V  K  I  V  G  E  E    262

961   acaaaagccagaggaaccaaagcgtagggtggatacttcagtgtcttgggaagcactgat   1020
263    Q  K  P  E  E  P  K  R  R  V  D  T  S  V  S  W  E  A  L  I    282

1021  ttgtgtcggatcatccaagaagagagcaaggaaggcatcctcttcagatataagagggcc   1080
283    C  V  G  S  S  K  K  R  A  R  K  A  S  S  S  D  I  R  G  P    302

1081  aaggacactgggaggggacagtcacagagcagaggaggccagcaaagacaaagaagccg   1140
303    R  T  L  G  G  G  Q  S  Q  S  R  G  G  Q  Q  R  Q  R  S  R    322

1141  aacagacgctgttcctgccagcacccaggagcaggaccaagcgcaaggaagttcctcacc   1200
323    T  D  A  V  P  A  S  T  Q  E  Q  D  Q  A  Q  G  S  S  S  P    342

1201  cgagccagcgggaagcccttccgaaggggaaggtgtctccacttgggagtcatttaaaag   1260
343    E  P  A  G  S  P  S  E  G  E  G  V  S  T  W  E  S  F  K  R    362
```

FIG.3B

(15 of 90)

```
1261  attagtcactccaagaaaaaaatccaagtcaaaactggaagagaaagaagccggaaggac  1320
 363   L  V  T  P  R  K  K  S  K  S  K  L  E  E  K  E  A  G  R  T   382

1321  tctagttgtaggagcaggttgtccactgagatcgaaccgtgtagagaagaatcttgggtt  1380
 383   L  V  V  G  A  G  C  P  L  R  S  N  R  V  E  K  N  I  G  F   402

1381  tccattaagaaattcatccccggacggcggaagaaaagggcagatgggaaggcaagaaca  1440
 403   P  I  R  N  S  S  P  D  G  G  R  K  G  Q  M  G  R  Q  E  Q   422

1441  agccactgtggaagactcagggccagtggagataaatgaggacgagcctgatgtcccagc  1500
 423   A  T  V  E  D  S  G  P  V  E  I  N  E  D  E  P  D  V  P  A   442

1501  agtcgtgcctctgtctgagtatgatgcagtggagagggagaagatggaagcccaggggaa  1560
 443   V  V  P  L  S  E  Y  D  A  V  E  R  F  K  M  E  A  Q  G  N   462

1561  tgcggagctgcccagctgctggggctgtgtagtgtccgaggagctcagtaagactctggt  1620
 463   A  E  L  P  S  C  W  G  C  V  V  S  E  E  L  S  K  T  L  V   482

1621  ccacactgtgagtgtcgcagtcattgatgggaccagggcagtcaccagtgtcgaagagcg  1680
 483   H  T  V  S  V  A  V  I  D  G  T  R  A  K  T  S  K  E  E  R   502

1681  gtctccttcgtggatatccgcttccgtaacagaacctcttgaacacacagcgggagaagc  1740
 503   S  P  S  W  I  S  A  S  V  T  E  P  L  E  H  T  A  G  E  A   522

1741  catgccacctgttgaagaggtcactgaaaaagacatcattgcagaagaaactcctgtgct  1800
 523   M  P  P  V  E  E  V  T  E  K  D  I  I  A  E  E  T  P  V  L   542

1801  cacccagacgttaccagagggtaaagatgcccatgacgacatggtcaccagtgaagtgga  1860
 543   T  Q  T  L  P  E  G  K  D  A  H  D  D  M  V  T  S  E  V  D   562
```

FIG.3C

1861	tttcacctcagaagctgtgacagccacagagacctcagaggctctccgtactgaagaagt	1920	
563	F T S E A V T A T F T S E A L R T E E V	582	
1921	taccgaagcatcgggggccgaagagaccacagacatggtgtccgcagtttcccagctgac	1980	
583	T E A S G A E E T T D M V S A V S Q L T	602	
1981	tgactccccagacaccacagaggaagccaccccagttcaggaggtagagggtggtgtgct	2040	
603	D S P D T T E E A T P V Q E V E G G V L	622	
2041	agatacagaagaagaggagcgccagacgcaggccatcctccaagccgttgcagacaaggt	2100	
623	D I E E F F R Q T Q A I I Q A V A D K V	642	
2101	gaaagaggagtcccaggtgcctgcaacccagactgtgcagagaacggggtcaaaagcact	2160	
643	K L E S Q V P A T Q T V Q R T G S K A L	662	
2161	ggagaaggttgaggaggtagaggaggactccgaagtgctggcttcggagaaagagaagga	2220	
663	E K V E E V E E D S E V L A S E K E K D	682	
2221	cgttatgccgaaaggacccgtgcaggaagctggagctgagcatcttgcacagggctctga	2280	
683	V M P K G P V Q E A G A E H L A Q G S F	702	
2281	gactggacaggctactccagagagccttgaagttcctgaagtcacagcagatgtagacca	2340	
703	T G Q A T P E S L E V P E V T A D V D H	722	
2341	tgtcgccacgtgccaggttatcaagctccagcagctgatggaacaggccgtggcccctga	2400	
723	V A T C Q V I K L Q Q L M E Q A V A P E	742	
2401	gtcatccgaaaccttgacagacagtgagacaaatggaagcactcccttagcagattcaga	2460	
743	S S E T L T D S E T N G S T R L A D S D	762	

FIG.3D

2461 cactgcagatgggacacagcaagatgaaaccattgacagccaggacagtaaagccactgc 2520
763 T A D G T Q Q D E T I D S Q D S K A T A 782

2521 agctgtcaggcagtcacaggtcacagaagaagaggcggctactgctcagaaagaggagcc 2580
783 A V E Q S Q V I E E E A A I A Q K E E P 802

2581 ttcgacactacctaataatgttccagcccaggaagaacatggggaagaaccaggaagaga 2640
803 S T L P N N V P A Q E E H G E E P G R D 822

2641 tgttcttgaacctacacagcaagagcttgctgctgcagccgtgcccgtctggcaaaagac 2700
823 V L E P T Q Q E L A A A A V P V W Q K T 842

2701 tgaggtgggtcaagagggtgaggttgactggttggatggagaaaaagtcaaagaagaaca 2760
843 E V G Q E G E V D W L D G E K V K E E Q 862

2761 ggaggtgtttgtacactctggacccaacagtcaaaaggctgctgatgtgacatatgacag 2820
863 E V F V H S G P N S Q K A A D V T Y D S 882

2821 tgaagtgatgggagtggccgggtgtcaggaaaaggagagtactgaagtgcagagtcttag 2880
883 E V M G V A G C Q E K E S T E V Q S L S 902

2882 cctggaggagggagagatggaaactgacgttgaaaaggagaaaagggagacaaagccaga 2940
903 L E E G E M E T D V E K E K R E T K P E 922

2941 gcaagtgagtgaagaaggtgagcaggaaacagccgctcctgagcatgaaaggaactacgg 3000
923 Q V S E E G E Q E T A A P E H E R N Y G 942

3001 gaagccagtcctgacacttgacatgcccagctcagagagggggaaggcactgggaagcct 3060
943 K P V L T L D M P S S E R G K A L G S L 962

FIG.3E

```
3061  tggaggaagccctlctctcccagaccaagacaaagcaggttgcatagaggttcaagttca  3120
 963   G  G  S  P  S  I  P  D  Q  D  K  A  G  C  I  E  V  Q  V  Q    982

3121  aagcctggacacaacagtcactcaaacagcagaagctgtggaaaaggtcatagaaacggt  3180
 983   S  I  D  I  T  V  T  Q  T  A  E  A  V  F  K  V  I  E  T  V   1002

3181  tgtgatttcagagacaggtgaaagtccagagtgtgtaggtgcacacttattaccagctga  3240
1003   V  I  S  E  T  G  E  S  P  E  C  V  G  A  H  L  I  P  A  E   1002
                              →Zn-finger←
3241  gaagtcctctgcaacgggtggccactggactcttcagcatgcagaggacacggtacccct  3300
1023   K  S  S  A  T  G  G  H  W  T  L  Q  H  A  F  D  T  V  P  L   1042

3301  ggggcctgagtctcaggcagaatccatcccaatcatagtaactcctgctcctgaaagcac  3360
1043   G  P  F  S  Q  A  F  S  I  P  I  I  V  T  P  A  P  E  S  T   1062

3361  cctacatcctgacctacaaggagaaataagcgcatcccagagagagcgatcagaggaaga  3420
1063   L  H  P  D  L  Q  G  E  I  S  A  S  Q  R  E  R  S  E  E  E   1082

3421  ggacaagccagatgctggtcctgatgctgacggcaaggagagtacagcaatcgacaaagt  3480
1083   D  K  P  D  A  G  P  D  A  D  G  K  E  S  T  A  I  D  K  V   1102

3481  cctcaaggctgaacctgagatcctggaacttgagagtaagagcaacaagattgtgctgaa  3540
1103   L  K  A  E  P  E  I  L  E  L  E  S  K  S  N  K  I  V  L  N   1122

3541  cgtcattcagacagccgttgaccagttcgcacgtacagaaacagcccccgaaactcatgc  3600
1123   V  I  Q  T  A  V  D  Q  F  A  R  T  E  I  A  P  E  T  H  A   1142

3601  ttatgattcacagacccaggttcctgcaatgcgcttggacagcagggagcccaacagatg  3660
1143   Y  D  S  Q  T  Q  V  P  A  M  R  L  D  S  R  E  P  N  R  C   1162
```

FIG.3F

(94 of 90)

3661	ctggacaaaaatgaaagttgccaagatgaaacacccagtgccgcagcccagagaggactt	3720
1163	W I K M K V A K M K H P V P Q P R E D L	1182
3721	gcaagtcctgaccgttctggaggcatggctcagctcggaaatgcttgccgcgcttgcagt	3780
1183	Q V L T V L E A W L S S E M L A A L A V	1202
3781	tgaaagcgccggtgtcaaagtaagcattgagaagctgcctcctcaacccaaagatcaaaa	3840
1203	E S A G V K V S I E K L P P Q P K D Q K	1222
3841	ggagcatgctgctgatggccctcagctccaaagcttagcccaggcagaggcagtgtctgg	3900
1223	E H A A D G P Q L Q S I A Q A E A V S G	1242
3901	aaacctaaccaaagaatccccagacaccaacggaccaaagctaaccgaggagcgatgccc	3960
1243	N I I K F S P D I N G P K L I F E R C P	1262
3961	ccaaaagttgaggtccaggaagaagaaatgtctaccaagtcagtcaaagagaacaaggcc	4020
1263	Q K I R S R K K K C L P S Q S K R T R P	1282
4021	caggcagaagaggacctgcaggagccaaagggagacctggcagaatcctaagatgttagt	4080
1283	R Q K R T C R S Q R E T W Q N P K M L V	1302
4081	tgctcattgtacatctgtaagaccagaatgtgaaaacaagtcacagaacaagatgctgct	4140
1303	A H C T S V R P E C E N K S Q N K M L L	1322
4141	gttgggaccttggaccaagatttcagagcccatgagatccagagagcagggccgtccaat	4200
1323	L G P W T K I S E P M R S R E Q G R P M	1342
4201	gatttccacccagtagagcaccccgacaattctgaggcttcatcgggagctagagccagc	4260
1343	I S T Q *	1346

FIG.3G

```
4261  taacatttcctcgtttcaagactgcctttgatttgccccttgatgccgtccgtgtatttc  4320
4321  ggatttaaggtcctgcgttctcaacctggaaccaattctgccatacctagttccacttct  4380
4381  caaactggagcatcctcctttatgtatttatatgtatgttttatgtagtcctcctcctgt  4440
4441  acctattgtatatttttttctaacgtttaagcacatgcttttgtattatgcaatatata  4500
4501  acgggtgtgcagccatagcgacgctttgaaaagctccaagcctcaactgtaacctgcagc  4560

4561  aaacagataacattcctggcaagaagagacaagtcttttttaaagtttactgatgcttag  4620
4621  atctgtgggcttctagtcctctgaaagtggttgttttcctatgcacagcgagctcagaaa  4680
4681  taaaaaccccatttttgaaaacatccaggatgtcccaatattaccatgatttttttccccct  4720
4721  ttttgctaatccagtccaggttggaaagaagtctcctctgtgtcagattaagccctgtct  4780
4781  cttaatgatatggacaaatgagtgtgcctaaggccatgagatgtttcctaatgcagaagg  4840
4741  aatctgttgtacgtttttttgattgtactcttctatgctggaccgaattcatatgcagat  4900
4901  cgaagtgagtcctgttcttacagatggtatttgatagatactggagtttgtctgtgtt  4960
4961  atatctgtgccccttctttaagaacaatgttgcattatgttcctttggataaattgtgat  5020
5021  ttgacaactgatttaaataaacatatttgactac(A).
```

FIG.3H

(11 of 40)

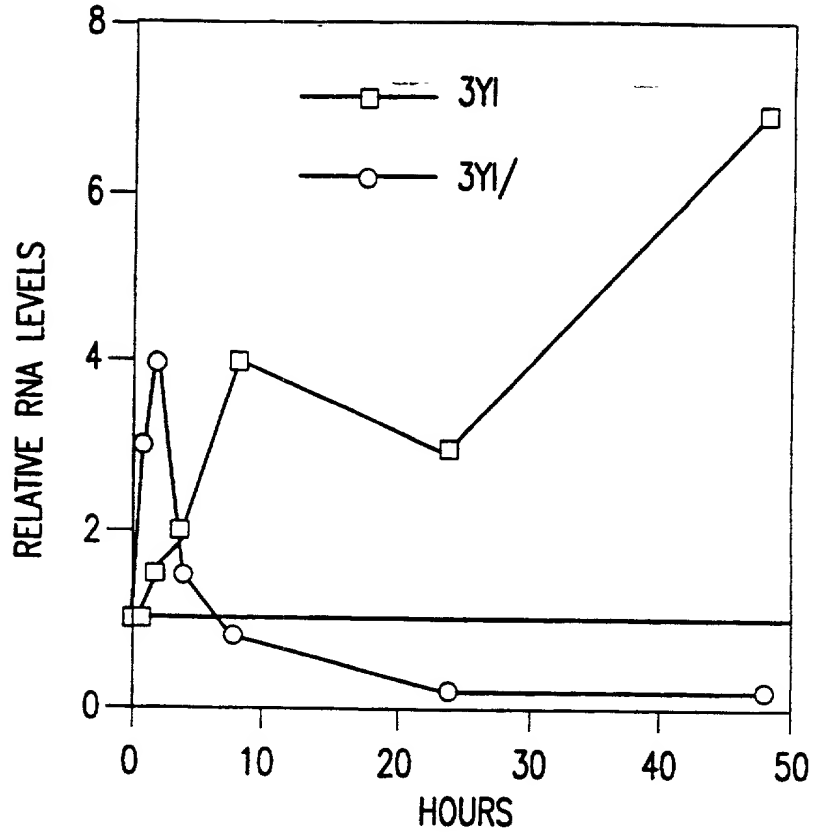

8
6
4
2
0
3YI
3YI/
RELATIVE RNA LEVELS
0
10
20
30
40
50
HOURS

FIG.4A

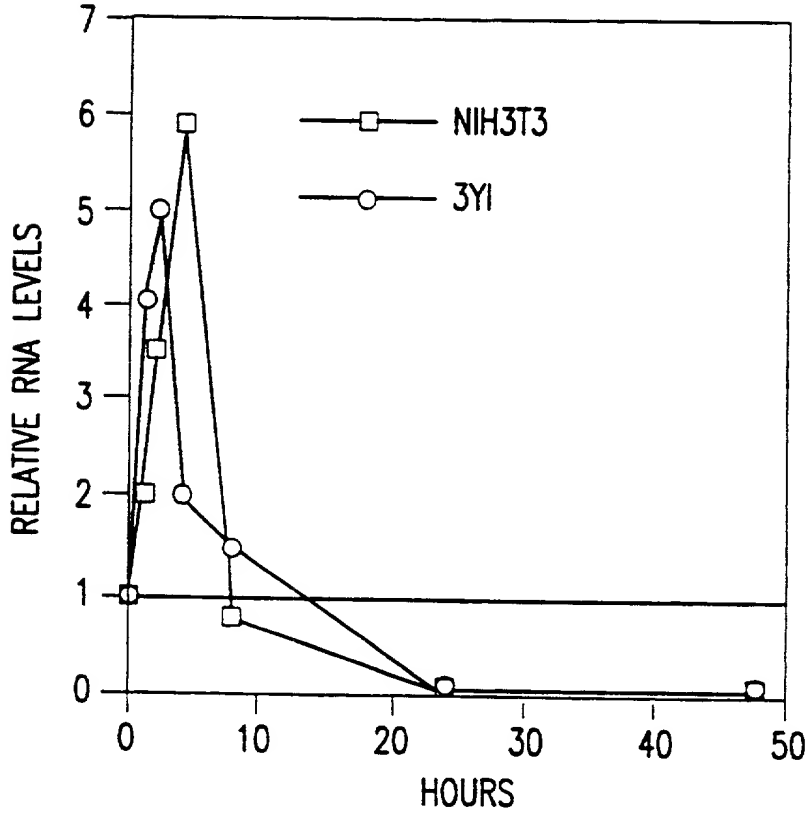

7
6
5
4
3
2
1
0
NIH3T3
3YI
RELATIVE RNA LEVELS
0
10
20
30
40
50
HOURS

FIG.4B

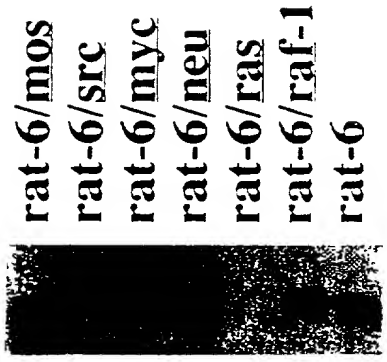


FIG.5

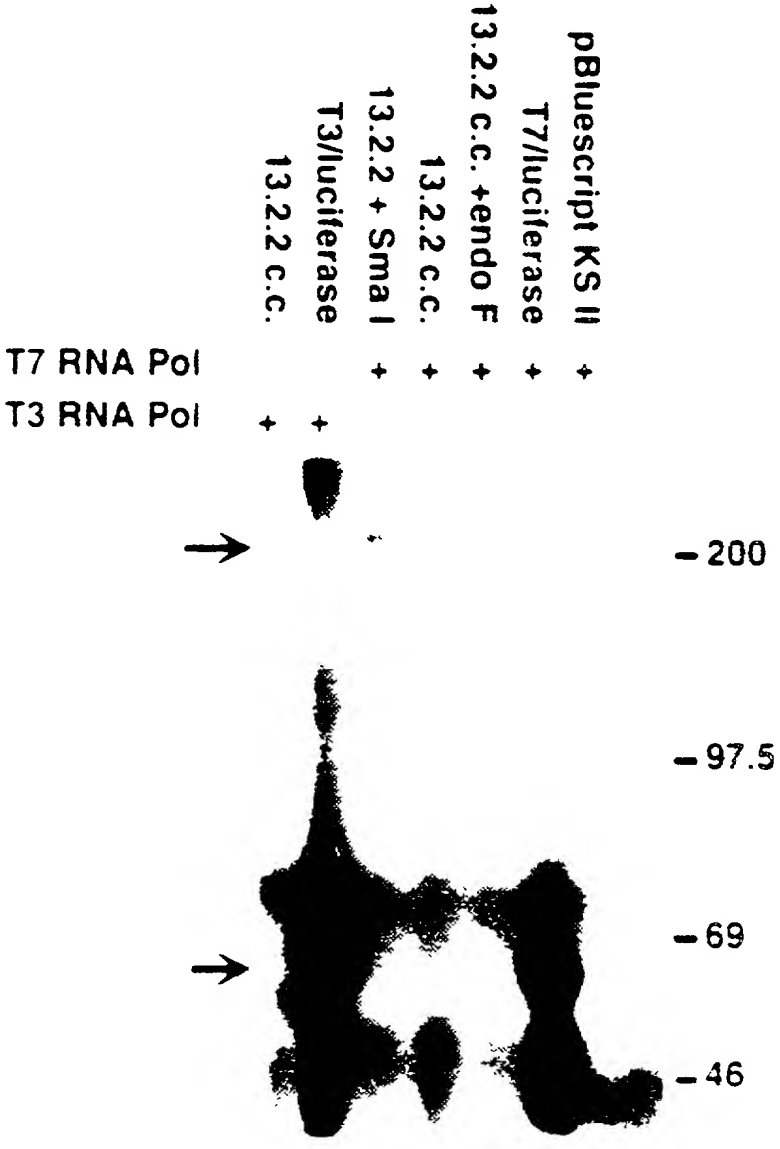

pBluescript KS II
T7/luciferase
13.2.2 c.c. +endo F
13.2.2 c.c.
13.2.2 + Sma I
T3/luciferase
13.2.2 c.c.
T7 RNA Pol
T3 RNA Pol
200
97.5
69
46

FIG.6

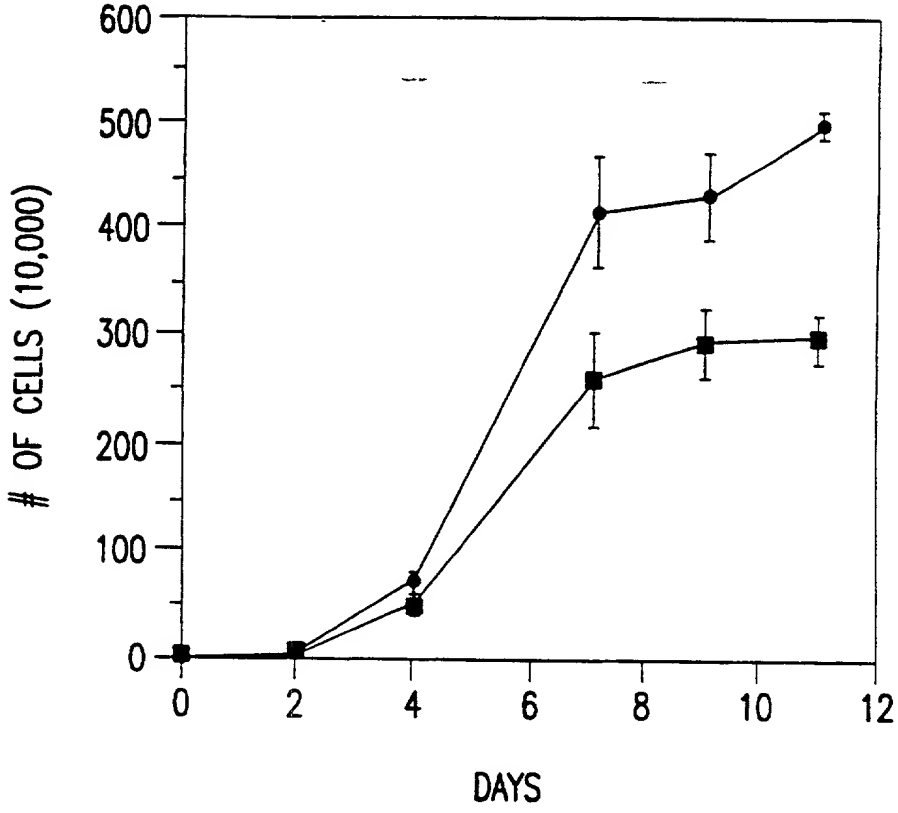

600
500
400
300
200
100
0
OF CELLS (10,000)
0
2
4
6
8
10
12
DAYS

FIG.7A

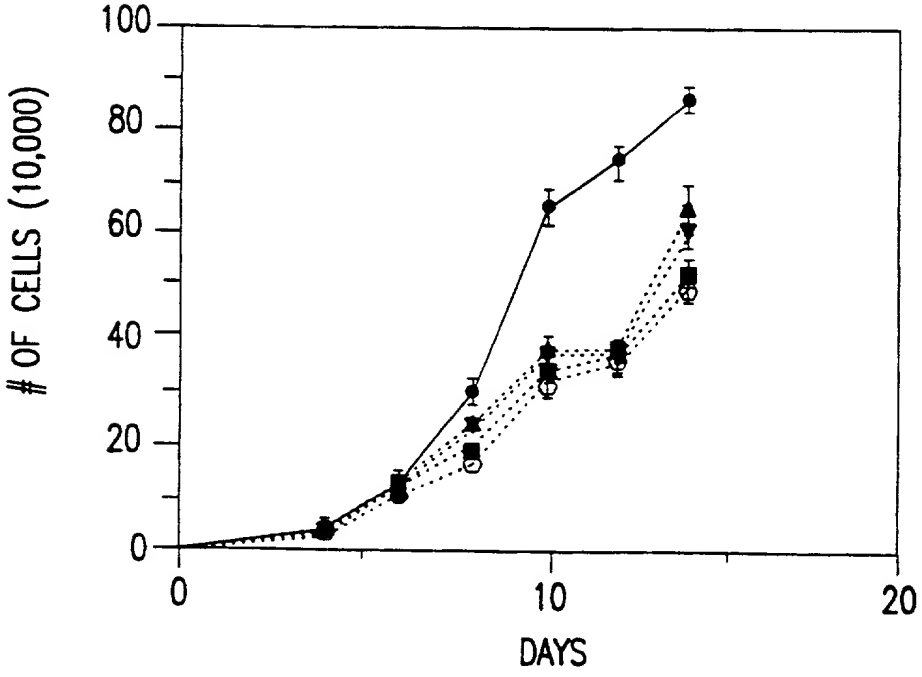

100
80
60
40
20
0
OF CELLS (10,000)
0
10
20
DAYS

FIG.7B

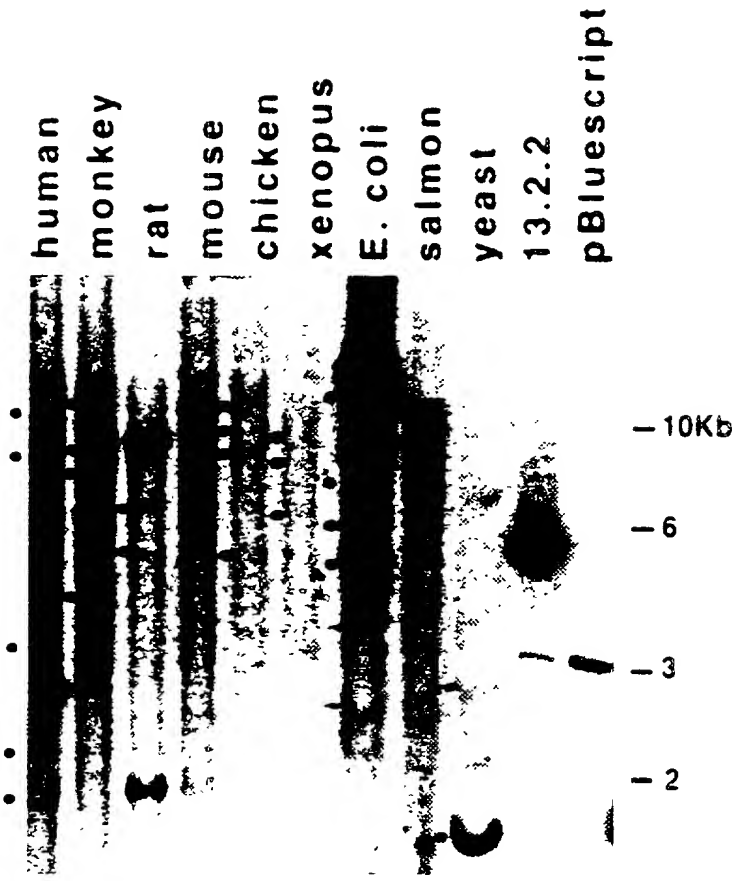

human
monkey
rat
mouse
chicken
xenopus
E. coli
salmon
yeast
13.2.2
pBluescript
10Kb
6
3
2

FIG.8

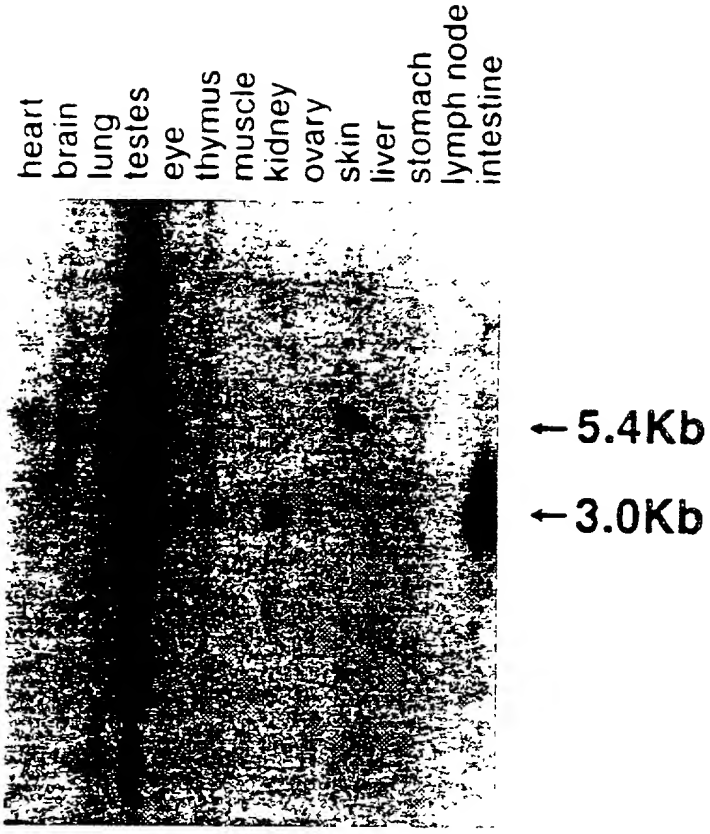

heart
brain
lung
testes
eye
thymus
muscle
kidney
ovary
skin
liver
stomach
lymph node
intestine
←5.4Kb
←3.0Kb

FIG.9

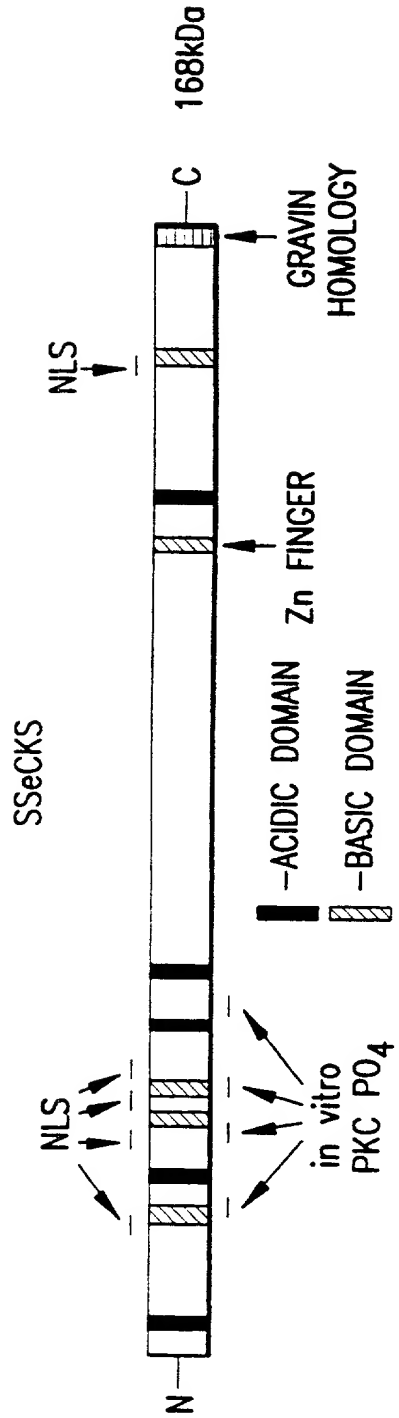

168kDa
C
GRAVIN HOMOLOGY
NLS
Zn FINGER
SSeCKS
ACIDIC DOMAIN
BASIC DOMAIN
NLS
in vitro PKC PO4
N

FIG.10

```
                9         18        27        36        45        54
5'  ATG GGC GCA GGC AGT TCC ACC GAG CAG CGG AGC CCC GAG CAG CCG GCG GGG AGC
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     M   G   A   G   S   S   T   E   Q   R   S   P   E   Q   P   A   G   S

               63        72        81        90        99       100
    GAC ACG CCG AGC GAG CTG GTG CTC AGT GGC CAT GGG CCC GCA GCT GAA GCC TCG
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     D   T   P   S   E   L   V   L   S   G   H   G   P   A   A   E   A   S

              117       126       135       144       153       162
    GGA GCA GCT GGA GAC CCC GCC GAC GCG GAC CCC GCC ACC AAG CTC CCA CAG AAG
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     G   A   A   G   D   P   A   D   A   D   P   A   T   K   L   P   Q   K

              171       180       189       198       207       216
    AAT GGC CAG CTG TCT TCT GTC AAC GGC GTA GCT GAA CAA GGA GAT GTC CAT GTC
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     N   G   Q   L   S   S   V   N   G   V   A   E   Q   G   D   V   H   V

              225       234       243       252       261       270
    CAA GAG GAA AAC CAG GAG GGG CAG GAG GAA GAA GTC GTT GAT GAG GAT GTT GGA
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     Q   E   E   N   Q   E   G   Q   E   E   E   V   V   D   E   D   V   G

              279       288       297       306       315       324
    CAG CGA GAG TCA GAA GAT GTG AGA GAA AAA GAC CGA GTT GAA GAA ATG GCG GCC
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     Q   R   E   S   E   D   V   R   E   K   D   R   V   E   E   M   A   A

              333       342       351       360       369       378
    AAC TCC ACA GCT GTT GAA GAT ATC ACA AAG GAT GGG CAG GAG GAG ACA TCA GAA
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     N   S   T   A   V   E   D   I   T   K   D   G   Q   E   E   T   S   E

              387       396       405       414       423       432
    ATA ATT GAA CAG ATC CCT GCT TCA GAA AAC AAT GTG GAA GAA ATG GTA CAG CCT
    --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
     I   I   E   Q   I   P   A   S   E   N   N   V   E   E   M   V   Q   P
```

FIG.11A

```
          441         450         459         468         477         486
GCT GAG TCC CAG GCT AAT GAT GTT GGC TTC AAG AAA GTA TTT AAA TTT GTT GGT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   E   S   Q   A   N   D   V   G   F   K   K   V   F   K   F   V   G

          495         504         513         522         531         540
TTT AAA TTC ACG GTG AAG AAG GAT AAA AAT GAA AAG TCA GAT ACT GTC CAA CTA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 F   K   F   T   V   K   K   D   K   N   E   K   S   D   T   V   Q   L

          549         558         567         576         585         594
CTC ACT GTC AAG AAG GAT GAA GGC GAA GGG GCA GAA GCC TCT GTC GGA GCT GGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   T   V   K   K   D   E   G   E   G   A   E   A   S   V   G   A   G

          603         612         621         630         639         648
GAC CAC CAG GAG CCC AGT GTG GAG ACT GCC GTC GGA GAG TCA GCA TCC AAA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   H   Q   E   P   S   V   E   T   A   V   G   E   S   A   S   K   E

          657         666         675         684         693         702
AGT GAG CTG AAG CAA TCC ACA GAG AAG CAA GAA GGC ACC CTG AAG CAA GAA CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   E   L   K   Q   S   T   E   K   Q   E   G   T   L   K   Q   E   Q

          711         720         729         738         747         756
AGC AGC ACA GAA ATC CCC CTT CAA GCC GAA TCT GAT CAA GCG GCT GAG GAA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   S   T   E   I   P   L   Q   A   E   S   D   Q   A   A   E   E   E

          765         774         783         792         801         810
GCC AAA GAT GAA GGA GAA GAA AAA CAA GAG AAA GAG CCC ACC AAG TCC CCA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   K   D   E   G   E   E   K   Q   E   K   E   P   T   K   S   P   E

          819         828         837         846         855         864
TCC CCG AGC AGC CCA GTC AAC AGT GAG ACA ACA TCT TCC TTC AAG AAG TTC TTC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   P   S   S   P   V   N   S   E   T   T   S   S   F   K   K   F   F
```

FIG.11B

```
          873         882         891         900         909         918
ACT CAC GGT TGG GCC GGC TGG CGC AAG AAG ACC AGC TTC AAG AAA TCA AAA GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 T   H   G   W   A   G   W   R   K   K   T   S   F   K   K   S   K   E

          927         936         945         954         963         972
GAT GAT CTG GAA ACT GCC GAG AAG AGA AAG GAG CAA GAG GCA GAA AAA GTA GAC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   D   L   E   T   A   E   K   R   K   E   Q   E   A   E   K   V   D

          981         990         999        1008        1017        1026
GAG GAA GAA AAG GAA AAG ACA GAG CCA GCC TCG GAG GAG CAG GAG CCG GCA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   E   E   K   E   K   T   E   P   A   S   E   E   Q   E   P   A   E

         1035        1044        1053        1062        1071        1080
GAC ACA GAC CAG GCC AGG TTG TCA GCA GAC TAC GAG AAG GTG GAG CTG CCT TTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   T   D   Q   A   R   L   S   A   D   Y   E   K   V   E   L   P   L

         1089        1098        1107        1116        1125        1134
GAA GAC CAG GTT GGT GAC CTG GAG GCA TCG TCA GAG GAG AAG TGT GCT CCT TTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   D   Q   V   G   D   L   E   A   S   S   E   E   K   C   A   P   L

         1143        1152        1161        1170        1179        1188
GCA ACG GAA GTG TTT GAT GAG AAG ATG GAA GCC CAC CAA GAA GTT GTT GCA GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   T   E   V   F   D   E   K   M   E   A   H   Q   E   V   V   A   E

         1197        1206        1215        1224        1233        1242
GTC CAC GTG AGC ACC GTG GAG AAG ACA GAG GAG GAG CAG GGA GGA GGA GGA GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   H   V   S   T   V   E   K   T   E   E   E   Q   G   G   G   G   E

         1251        1260        1269        1278        1287        1296
GCT GAA GGG GGC GTG GTG GTA GAA GGA ACA GGA GAA TCC TTG CCC CCT GAG AAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   E   G   G   V   V   V   E   G   T   G   E   S   L   P   P   E   K
```

FIG.11C

```
      1305       1314       1323       1332       1341       1350
CTG GCT GAG CCC CAG GAG GTC CCC CAG GAA GCT GAG CCT GCT GAG GAG CTG ATG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   A   E   P   Q   E   V   P   Q   E   A   E   P   A   E   E   L   M

      1359       1368       1377       1386       1395       1404
AAG AGC AGA GAG ATG TGT GTC TCT GGA GGA GAC CAC ACT CAA CTG ACA GAC CTA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   S   R   E   M   C   V   S   G   G   D   H   T   Q   L   T   D   L

      1413       1422       1431       1440       1449       1458
AGT CCT GAA GAG AAG ACG CTG CCC AAA CAC CCA GAA GGC ATT GTC AGT GAG GTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   P   E   E   K   T   L   P   K   H   P   E   G   I   V   S   E   V

      1467       1476       1485       1494       1503       1512
GAG ATG CTG TCC TCT CAG GAA AGA ATC AAG GTA CAG GGA AGT CCC TTG AAG AAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   M   L   S   S   Q   E   R   I   K   V   Q   G   S   P   L   K   K

      1521       1530       1539       1548       1557       1566
CTC TTC AGT AGC TCA GGC TTA AAG AAG CTG TCT GGG AAG AAG CAG AAG GGG AAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   F   S   S   S   G   L   K   K   L   S   G   K   K   Q   K   G   K

      1575       1584       1593       1602       1611       1620
CGA GGA GGT GGG GGA GAC GAA GAG CCT GGA GAA TAC CAA CAC ATT CAC ACC GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 R   G   G   G   G   D   E   E   P   G   E   Y   Q   H   I   H   T   E

      1629       1638       1647       1656       1665       1674
TCC CCA GAG AGT GCT GAT GAG CAG AAG GGA GAG AGC TCT GCG TCG TCC CCC GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   P   E   S   A   D   E   Q   K   G   E   S   S   A   S   S   P   E

      1683       1692       1701       1710       1719       1728
GAG CCT GAG GAG ACC ACG TGT CTG GAG AAA GGG CCG CTG GAA GCA CCC CAG GAT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   P   E   E   T   T   C   L   E   K   G   P   L   E   A   P   Q   D
```

FIG.11D

```
      1737       1746       1755       1764       1773       1782
GGG GAA GCT GAG GAA GGA ACT ACT TCC GAT GGA GAG AAG AAG AGA GAA GGG ATC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   E   A   E   E   G   T   T   S   D   G   E   K   K   R   E   G   I

      1791       1800       1809       1818       1827       1836
ACT CCC TGG GCA TCC TTC AAA AAG ATG GTG ACA CCC AAG AAA CGG GTC CGA AGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 T   P   W   A   S   F   K   K   M   V   T   P   K   K   R   V   R   R

      1845       1854       1863       1872       1881       1890
CCT TCT GAG AGT GAC AAG GAG GAA GAG CTG GAG AAG GTC AAG AGC GCC ACC TTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 P   S   F   S   D   K   E   E   E   L   E   K   V   K   S   A   T   L

      1899       1908       1917       1926       1935       1944
TCC TCC ACT GAT AGC ACA GTG TCA GAA ATG CAA GAT GAA GTC AAA ACT GTT GGT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   S   T   D   S   T   V   S   E   M   Q   D   E   V   K   T   V   G

      1953       1962       1971       1980       1589       1998
GAG GAA CAA AAG CCA GAG GAA CCA AAG CGT AGG GTG GAT ACT TCA GTG TCT TGG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   E   Q   K   P   E   E   P   K   R   R   V   D   T   S   V   S   W

      2007       2016       2025       2034       2043       2052
GAA GCA CTG ATT TGT GTC GGA TCA TCC AAG AAG AGA GCA AGG AAG GCA TCC TCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   A   L   I   C   V   G   S   S   K   K   R   A   R   K   A   S   S

      2061       2070       2079       2088       2097       2106
TCA GAT GAT GAA GGA GGG CCA AGG ACA CTG GGA GGG GAC AGT CAC AGA GCA GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   D   D   E   G   G   P   R   T   L   G   G   D   S   H   R   A   E

      2115       2124       2133       2142       2151       2160
GAG GCC AGC AAA GAC AAA GAA GCC GGA ACA GAC GCT GTT CCT GCC AGC ACC CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   A   S   K   D   K   E   A   G   T   D   A   V   P   A   S   T   Q
```

FIG.11E

```
      2169       2178       2187       2196       2205       2114
GAG CAG GAC CAA GCG CAA GGA AGT ICC TCA CCC GAG CCA GCG GGA AGC CTT TCC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   Q   D   Q   A   Q   G   S   S   S   P   E   P   A   G   S   P   S

      2223       2232       2241       2250       2259       2268
GAA GGG GAA GGT GTC TCC ACT TGG GAG TCA TTT AAA AGA TTA GTC ACT CCA AGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   G   E   G   V   S   T   W   E   S   F   K   R   L   V   T   P   R

      2277       2286       2295       2304       2313       2322
AAA AAA TCC AAG TCA AAA CTG GAA GAG AAA GCC GAA GAC TCT AGT GTA GAG CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   K   S   K   S   K   L   E   E   K   A   E   D   S   S   V   E   Q

      2331       2340       2349       2358       2367       2376
TTG TCC ACT GAG ATC GAA CCG AGT AGA GAA GAA TCT TGG GTT TCC ATT AAG AAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   S   T   E   I   E   P   S   R   E   E   S   W   V   S   I   K   K

      2385       2394       2403       2412       2421       2430
TTC ATC CCC GGA CGG CGG AAG AAA AGG GCA GAC GGG AAG CAA GAA CAA GCC ACT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 F   I   P   G   R   R   K   K   R   A   D   G   K   Q   E   Q   A   T

      2439       2448       2457       2466       2475       2484
GTG GAA GAC TCA GGG CCA GTG GAG ATA AAT GAG GAC GAC CCT AAT GTC CCA GCC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   E   D   S   G   P   V   E   I   N   E   D   D   P   N   V   P   A

      2493       2502       2511       2520       2529       2538
GTC GTG CCT CTG TCT GAG TAT AAT GCA GTG GAG AGG GAG AAG ATG GAA GCC CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   V   P   L   S   E   Y   N   A   V   E   R   E   K   M   E   A   Q

      2547       2556       2565       2574       2583       2592
GGG AAT ACG GAG CTG CCC CAG CTG CTG GGG GCT GTG TAC GTG TCC GAG GAG CTC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   N   T   E   L   P   Q   L   L   G   A   V   Y   V   S   E   E   L
```

FIG.11F

```
      2601       2610       2619       2628       2637       2646
AGT AAG ACT CTG GTC CAC ACT GTG AGT GTC GCA GTC ATT GAT GGG ACC AGG GCA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   K   T   L   V   H   T   V   S   V   A   V   I   D   G   T   R   A

      2655       2664       2673       2682       2691       2700
GTC ACC AGT GTC GAA GAG CGG TCT CCT TCG TGG ATA TCC GCT TCC GTA ACA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   T   S   V   E   E   R   S   P   S   W   I   S   A   S   V   T   E

      2790       2718       2727       2736       2745       2754
CCT CTT GAA CAC ACA GCG GGA GAA GCC ATG CCA CCT GTT GAA GAG GTC ACT GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 P   L   E   H   T   A   G   E   A   M   P   P   V   E   E   V   T   E

      2763       2772       2781       2790       2799       2808
AAA GAC ATC ATT GCA GAA GAA ACT CCT GTG CTC ACC CAG ACG TTA CCA GAG GGT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   D   I   I   A   E   E   T   P   V   L   T   Q   T   L   P   E   G

      2817       2826       2835       2844       2853       2862
AAA GAT GCC CAT GAC GAC ATG GTC ACC AGT GAA GTG GAT TTC ACC TCA GAA GCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   D   A   H   D   D   M   V   T   S   E   V   D   F   T   S   E   A

      2871       2880       2889       2898       2907       2916
GTG ACA GCC ACA GAG ACC TCA GAG GCT CTC CGT ACT GAA GAA GTT ACC GAA GCA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   T   A   T   E   T   S   E   A   L   R   T   E   E   V   T   E   A

      2925       2934       2943       2952       2961       2970
TCG GGG GCC GAA GAG ACC ACA GAC ATG GTG TCC GCA GTT TCC CAG CTG ACT GAC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   G   A   E   E   T   T   D   M   V   S   A   V   S   Q   L   T   D

      2979       2988       2997       3006       3015       3024
TCC CCA GAC ACC ACA GAG GAA GCC ACC CCA GTT CAG GAG GTA GAG AGT GGT GTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   P   D   T   T   E   E   A   T   P   V   Q   E   V   E   S   G   V
```

FIG.11G

```
      3033        3042        3051        3060        3069        3078
CTA GAT ACA GAA GAA GAG GAG CGC CAG ACG CAG GCC ATC CTC CAA GCC GTT GCA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   D   T   E   E   E   E   R   Q   T   Q   A   I   L   Q   A   V   A

      3087        3096        3105        3114        3123        3132
GAC AAG GTG AAA GAG GAG TCC CAG GTG CCT GCA ACC CAG ACT GTG CAG AGA ACG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   K   V   K   E   E   S   Q   V   P   A   T   Q   T   V   Q   R   T

      3141        3150        3159        3168        3177        3186
GGG TCA AAA GCA CTG GAG AAG GTT GAG GAG GTA GAG GAG GAC TCC GAA GTG CTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   S   K   A   L   E   K   V   E   E   V   E   E   D   S   E   V   L

      3195        3204        3213        3222        3231        3240
GCT TCG GAG AAA GAG AAG GAC GTT ATG CCG AAA GGA CCC GTG CAG GAA GCT GGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   S   E   K   E   K   D   V   M   P   K   G   P   V   Q   E   A   G

      3195        3258        3267        3276        3285        3294
GCT GAG CAT CTT GCA CAG GGC TCT GAG ACT GGA CAG GCT ACT CCA GAG AGC CTT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   E   H   L   A   Q   G   S   E   T   G   Q   A   T   P   E   S   L

      3303        3312        3321        3330        3339        3348
GAA GTT CCT GAA GTC ACG GCA GAT GTA GAC CAT GTC GCC ACG TGC CAG GTT ATC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   V   P   E   V   T   A   D   V   D   H   V   A   T   C   Q   V   I

      3357        3366        3375        3384        3393        3402
AAG CTC CAG CAG CTG ATG GAA CAG GCC GTG GCC CCT GAG TCA TCC GAA ACC TTG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   L   Q   Q   L   M   E   Q   A   V   A   P   E   S   S   E   T   L

      3411        3420        3429        3438        3447        3456
ACA GAC AGT GAG ACA AAT GGA AGC ACT CCC TTA GCA GAT TCA GAC ACT GCA GAT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 T   D   S   E   T   N   G   S   T   P   L   A   D   S   D   T   A   D
```

FIG.11H

```
      3465       3474       3483       3492       3501       3510
GGG ACA CAG CAA GAT GAA ACC ATT GAC AGC CAG GAC AGT AAA GCC ACT GCA GCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   T   Q   Q   D   E   T   I   D   S   Q   D   S   K   A   T   A   A

      3519       3528       3537       3546       3555       3564
GTC AGG CAG TCA CAG GTC ACA GAA GAA GAG GCG GCT ACT GCT CAG AAA GAG GAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   R   Q   S   Q   V   T   E   E   E   A   A   T   A   Q   K   E   E

      3573       3582       3591       3600       3609       3618
CCT TCG ACA CTA CCT AAT AAT GTT CCA GCC CAG GAA GAA CAT GGG GAA GAA CCA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 P   S   T   L   P   N   N   V   P   A   Q   E   E   H   G   E   E   P

      3627       3636       3645       3654       3663       3672
GGA AGA GAT GTT CTT GAA CCT ACA CAG CAA GAG CTT ACT GCT GCA GCC GTG CCC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   R   D   V   L   E   P   T   Q   Q   E   L   T   A   A   A   V   P

      3681       3690       3699       3708       3717       3726
GTT CTG GCA AAG ACT GAG GTG GGT CAA GAG GGT GAG GTT GAC TGG TTG GAT GGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 V   L   A   K   T   E   V   G   Q   E   G   E   V   D   W   L   D   G

      3735       3744       3753       3762       3771       3780
GAA AAA GTC AAA GAA GAA CAG GAG GTG TTT GTA CAC TCT GGA CCC AAC AGT CAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   K   V   K   E   E   Q   E   V   F   V   H   S   G   P   N   S   Q

      3789       3798       3807       3816       3825       3834
AAG GCT GCT GAT GTG ACA TAT GAC AGT GAA GTG ATG GGA GTG GCC GGG TGT CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 K   A   A   D   V   T   Y   D   S   E   V   M   G   V   A   G   C   Q

      3843       3852       3861       3870       3879       3888
GAA AAG GAG AGT ACT GAA GTG CAG AGT CTT AGC CTG GAG GAG GGA GAG ATG GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   K   E   S   T   E   V   Q   S   L   S   L   E   E   G   E   M   E
```

FIG.11I

```
      3897        3906        3915        3924        3933        3942
ACT GAC GTT GAA AAG GAG AAA AGG GAG ACA AAG CCA GAG CAA GTG AGT GAA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 T   D   V   E   K   E   K   R   E   T   K   P   E   Q   V   S   E   E

      3951        3960        3969        3978        3987        3996
GGT GAG CAG GAA ACA GCC GCT CCT GAG CAT GAA GGA ACC TAC GGG AAG CCA GTC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   E   Q   E   T   A   A   P   E   H   E   G   T   Y   G   K   P   V

      4005        4014        4023        4032        4041        4050
CTG ACA CTT GAC ATG CCC AGC TCA GAG AGG GGG AAG GCA CTG GGA AGC CTT GGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   T   L   D   M   P   S   S   E   R   G   K   A   L   G   S   L   G

      4059        4068        4077        4086        4095        4104
GGA AGC CCT TCT CTC CCA GAC CAA GAC AAA GCA GGT TGC ATA GAG GTT CAA GTT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 G   S   P   S   L   P   D   Q   D   K   A   G   C   I   E   V   Q   V

      4113        4122        4131        4140        4149        4158
CAA AGC CTG GAC ACA ACA GTC ACT CAA ACA GCA GAA GCT GTG GAA AAG GTC ATA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 Q   S   L   D   T   T   V   T   Q   T   A   E   A   V   E   K   V   I

      4167        4176        4185        4194        4203        4212
GAA ACG GTT GTG ATT TCA GAG ACA GGT GAA AGT CCA GAG TGT GTA GGT GAC CAC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   T   V   V   I   S   E   T   G   E   S   P   E   C   V   G   A   H

      4221        4230        4239        4248        4257        4266
TTA TTA CCA GCT GAG AAG TCC TCT GCA ACG GGT GGC CAC TGG ACT CTT CAG CAT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   L   P   A   E   K   S   S   A   T   G   G   H   W   T   L   Q   H

      4275        4284        4293        4902        4311        4320
GCA GAG GAC ACG GTA CCC CTG GGG CCT GAG TCT CAG GCA GAA TCC ATC CCA ATC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 A   E   D   T   V   P   L   G   P   E   S   Q   A   E   S   I   P   I
```

FIG.11J

```
      4329        4338        4347        4356        4365        4374
ATA GTA ACT CCT GCT CCT GAA AGC ACC CTA CAT CCT GAC CTA CAA GGA GAA ATA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 I   V   T   P   A   P   E   S   T   L   H   P   D   L   Q   G   E   I

      4383        4392        4401        4410        4419        4428
AGC GCA TCC CAG AGA GAG CGA TCA GAG GAA GAG GAC AAG CCA GAT GCT GGT CCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 S   A   S   Q   R   E   R   S   E   E   E   D   K   P   D   A   G   P

      4437        4446        4455        4464        4473        4482
GAT GCT GAC GGC AAG GAG AGT ACA GCA ATC GAA AAA GTC CTC AAG GCT GAA CCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   A   D   G   K   E   S   T   A   I   E   K   V   L   K   A   E   P

      4491        4500        4509        4518        4527        4536
GAG ATC CTG GAA CTT GAG AGT AAG AGC AAC AAG ATT GTG CTG AAC GTC ATT CAG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   I   L   E   L   E   S   K   S   N   K   I   V   L   N   V   I   Q

      4545        4554        4563        4572        4581        4590
ACA GCC GTT GAC CAG TTC GCA CGT ACA GAA ACA GCC CCC GAA ACT CAT GCT TAT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 T   A   V   D   Q   F   A   R   T   E   T   A   P   E   T   H   A   Y

      4599        4608        4617        4626        4635        4644
GAT TCA CAG ACC CAG GTT CCT GCA TGC AGG CTT GAC AGC AGG GAG CCC AAC AGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 D   S   Q   T   Q   V   P   A   C   R   L   D   S   R   E   P   N   R

      4653        4662        4671        4680        4689        4698
TGC TGG ACA AAA ATG AAA GAT GCC AAG ATG AAA CAC CCA GTG CCG CAG CCC AGA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 C   W   T   K   M   K   D   A   K   M   K   H   P   V   P   Q   P   R

      4707        4716        4725        4734        4743        4752
GAG GAC TTG CAA GTC CTG ACC GTT CTG GAG GCA TGG GCT CAG CCT CGG AAA TGC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 E   D   L   Q   V   L   T   V   L   E   A   W   A   Q   P   R   K   C
```

FIG.11K

```
      4761        4770        4779        4788        4797        4806
TTG CCG CGC TTG CAG TTG AAA GCG CCG GTG TCA AAG TAA GCA TTG AGA AGC TGC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
 L   P   R   L   Q   L   K   A   P   V   S   K   *

      4815        4824        4833        4842        4851        4860
CTC CTC AAC CCA AAG ATC CAA AAG GAG CAT GCT GCT GAT GGC CCT CAG CTC CAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      4869        4878        4887        4896        4905        4914
AGC TTA GCC CAG GCA GAG GCC AGT GCC TCT GGA AAC CTA ACC AAA GAA TCC CCA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      4923        4932        4941        4950        4959        4968
GAC ACC ACC GGA CCA AAG CTA ACC GAG GAG GGC GAT CCC CCA AAA GTT CAG GTC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      4977        4986        4995        5004        5013        5022
CAG GAA GAA GAA ATG TCT ACC AAG TCA GTC AAA GAG AAC AAG GCC CAG GCA GAA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      5031        5040        5049        5058        5067        5076
GAG GAC CTG CAG GAG CCA AAG GGA GAC CTG GCA GAA TCC TCC GAT GTT AGT TGC
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      5085        5094        5103        5112        5121        5130
TCA TTG TAC ATC TGT AAG ACC AGA ATG TGA AAA CAA GTC ACA GAA CAA GAT GCT
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      5139        5148        5157        5166        5175        5184
GCT GTT GGG ACC TTG AGA CCA AGA TTT CAG AGC CCA TGA CAT CCA GAG AGC AGG
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

      5193
GCC GTC CAA TGA TTT C 3'
--- --- --- --- --- -
```

FIG.11L

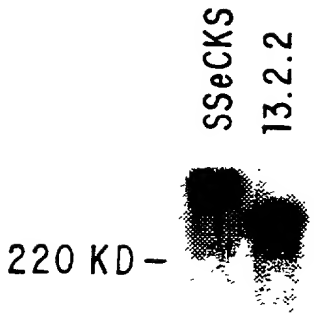


FIG. 12

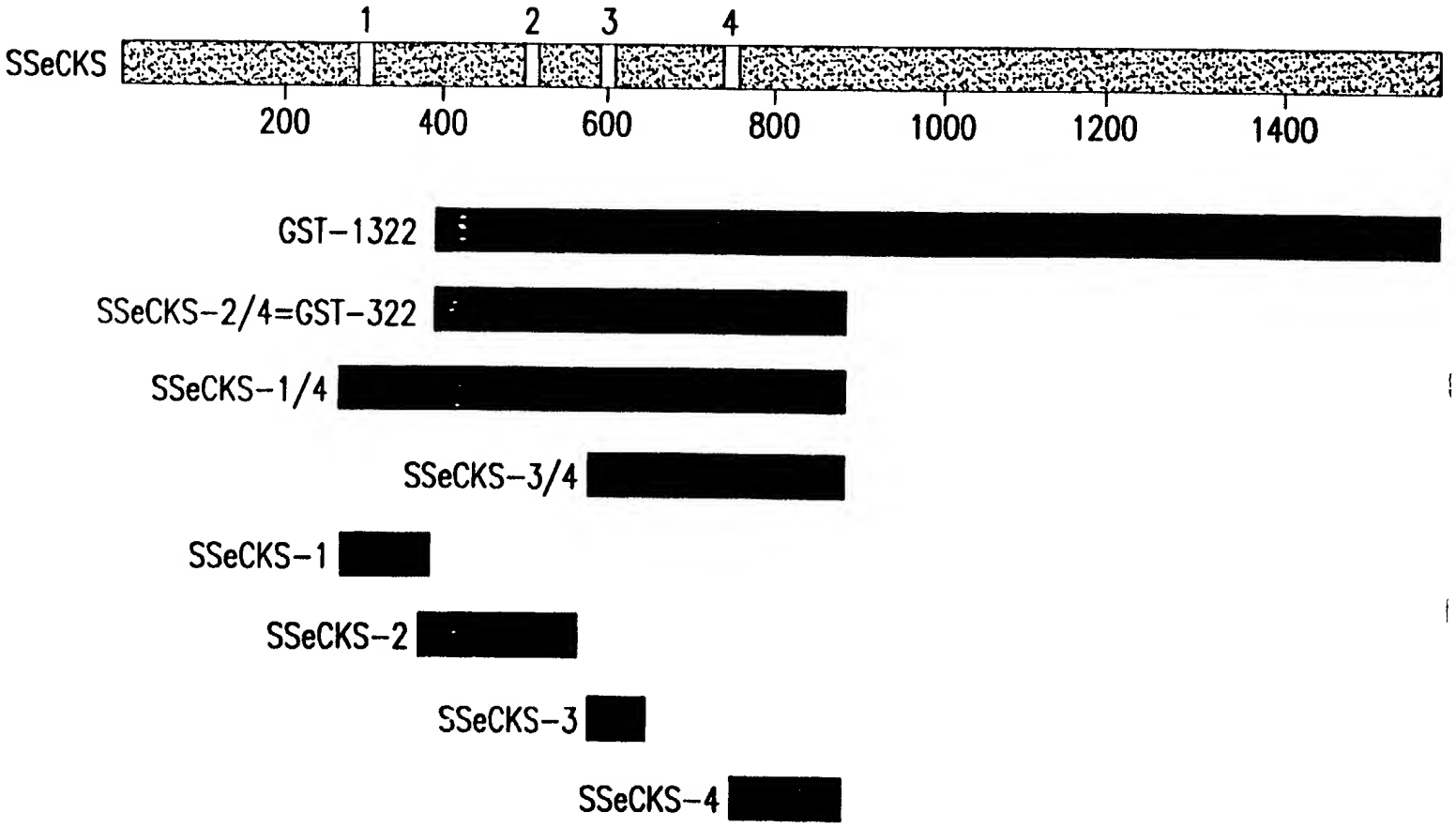


FIG.13A

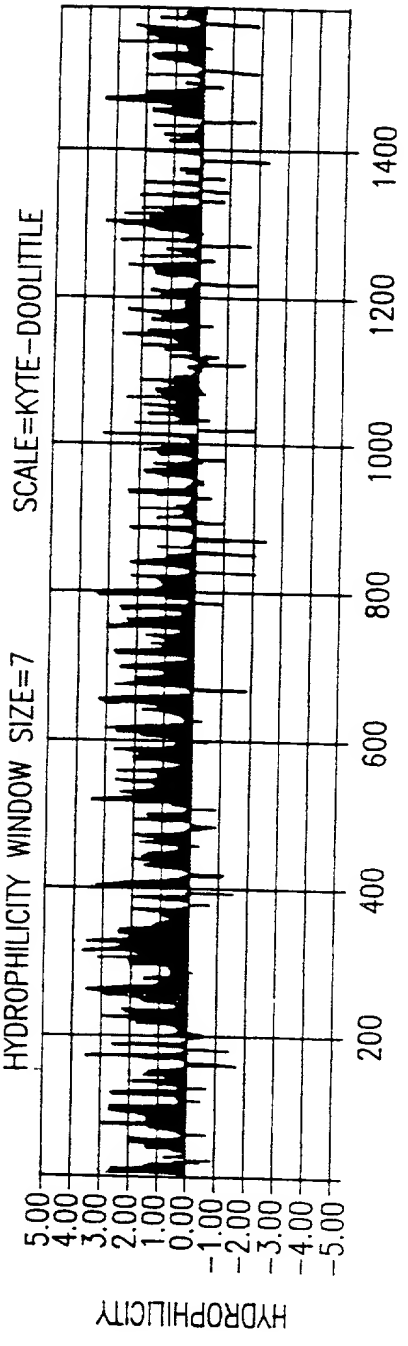


FIG.13B

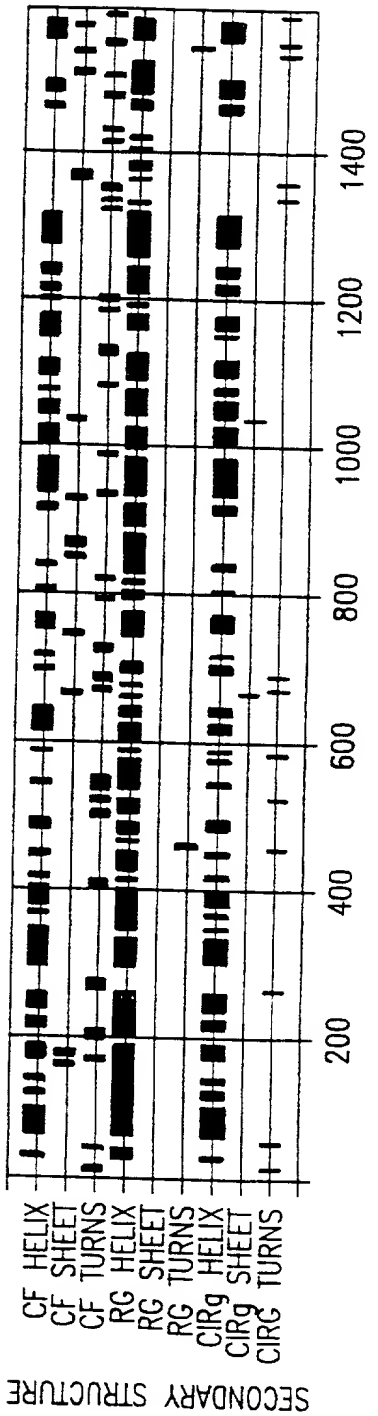


FIG.13C

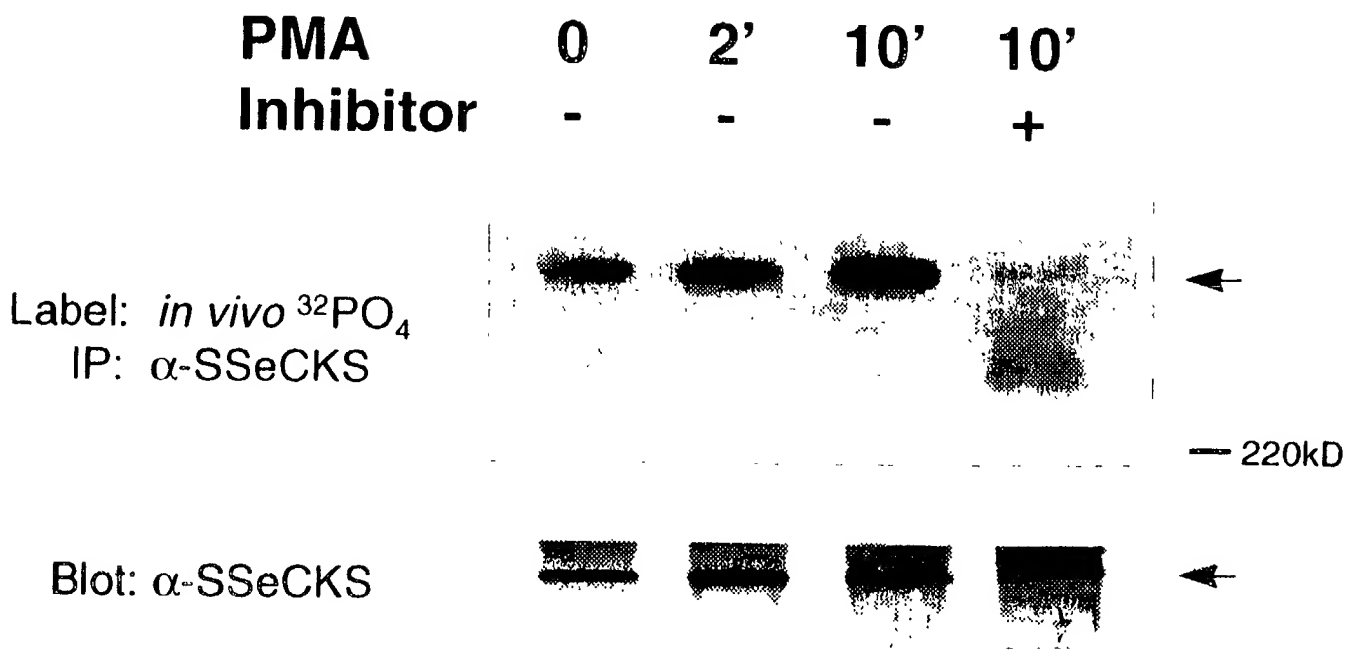


FIG.14

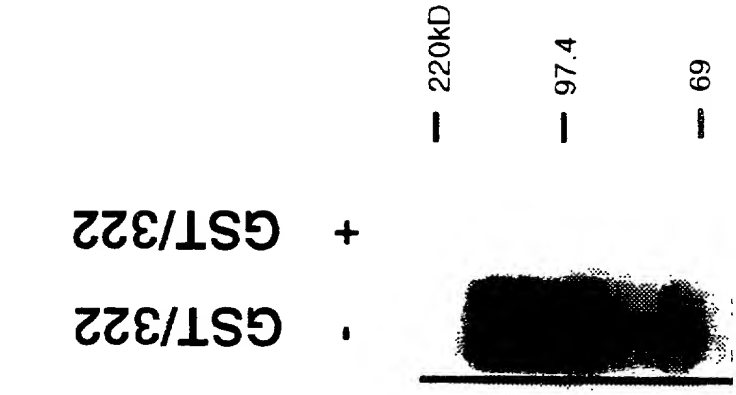


FIG.15B

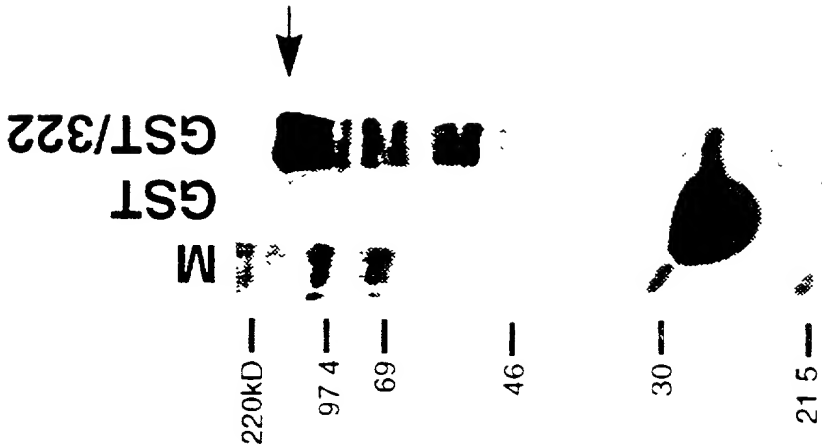


FIG.15A

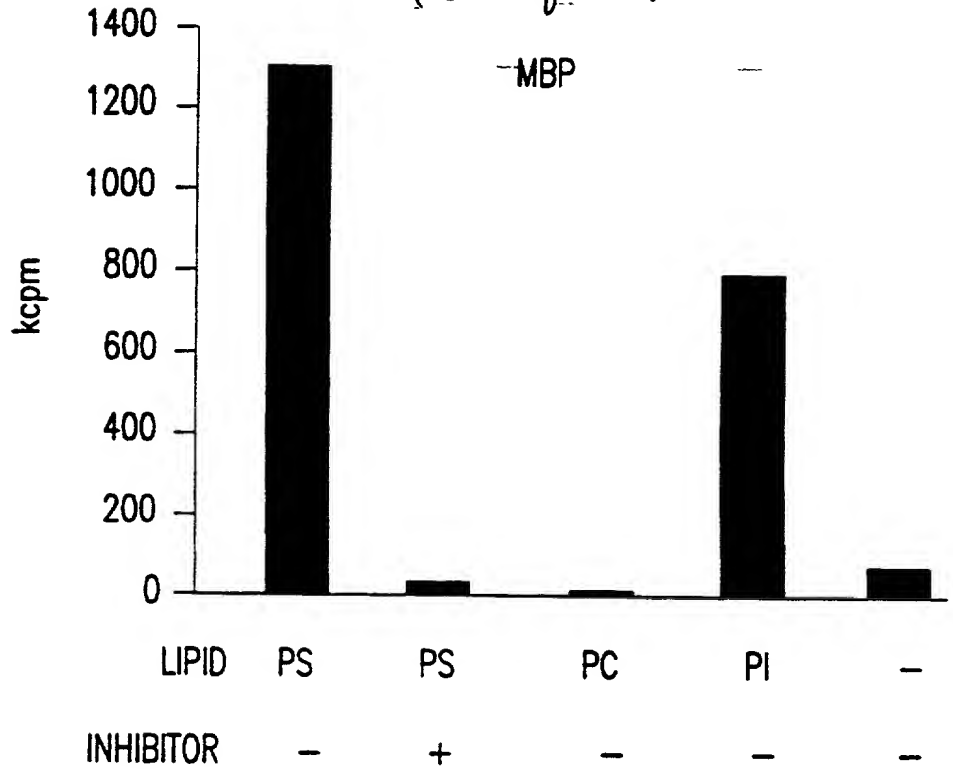


FIG.16A

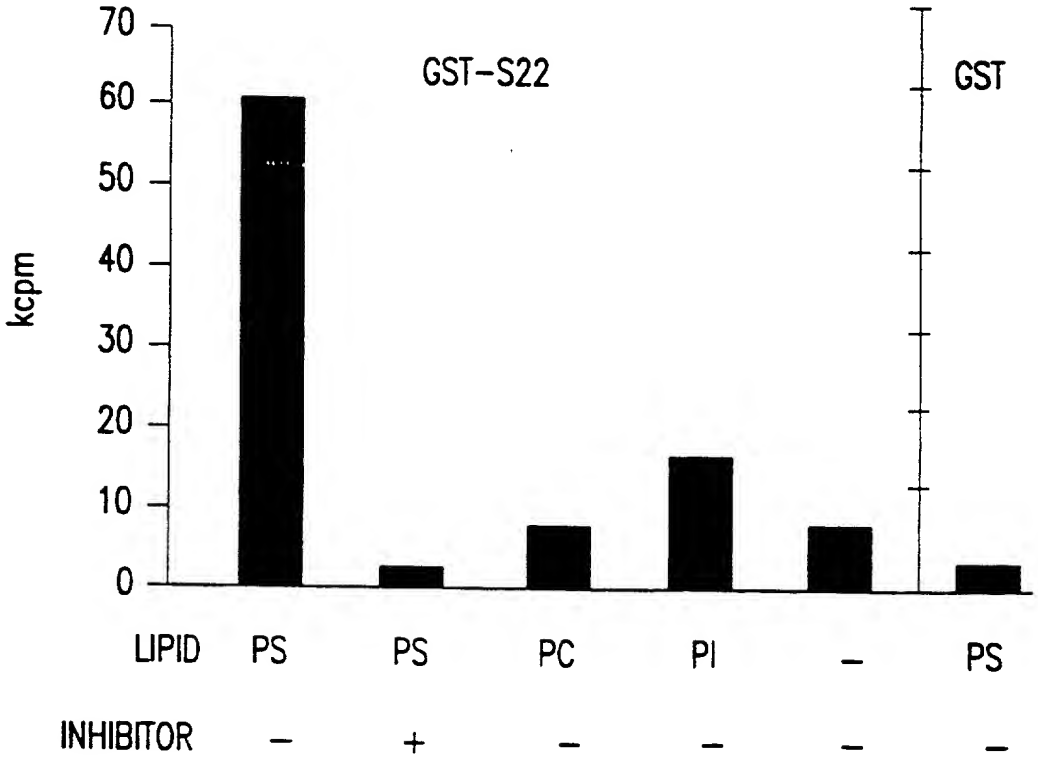


FIG.16B

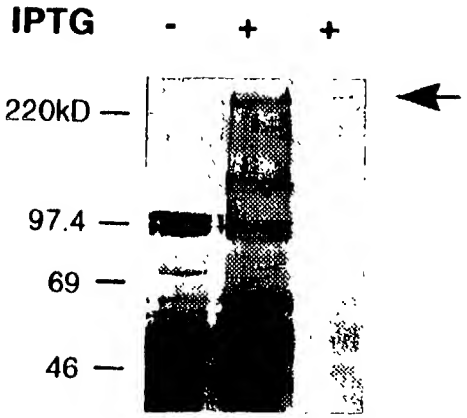


FIG.17A

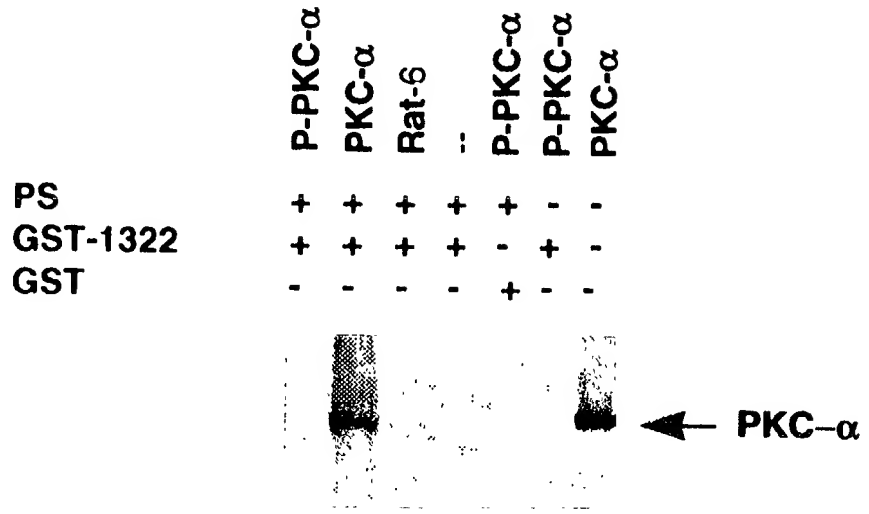


FIG.17B

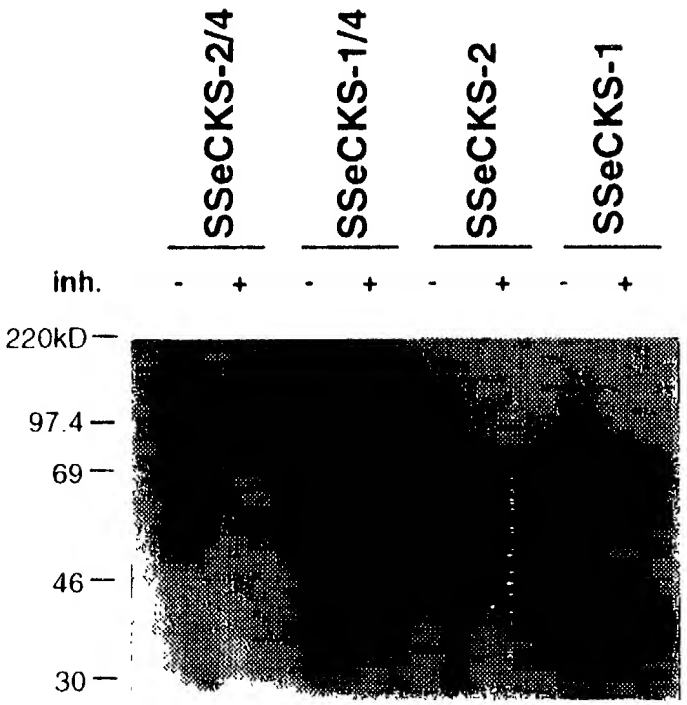


FIG.18A

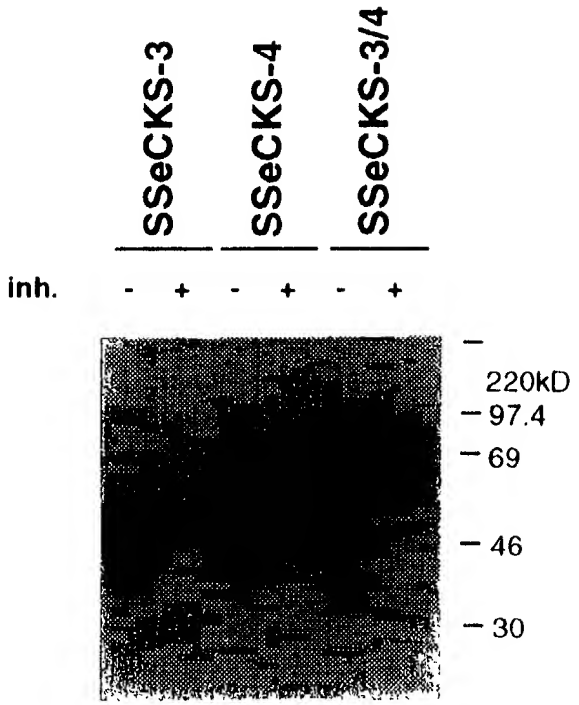
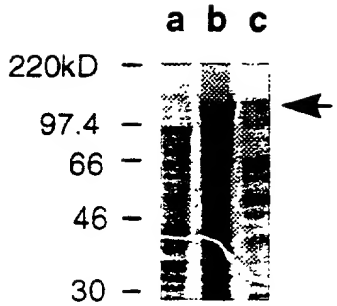


FIG.18B

(38 of 90)



SSeCKS-2/4

FIG.18C

SSeCKS-1/4

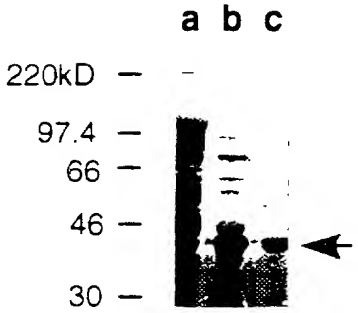
FIG.18D

SSeCKS-2

FIG.18E

SSeCKS-1

FIG.18F



SSeCKS-3

FIG.18G

SSeCKS-4

FIG.18H

SSeCKS-3/4

FIG.18I

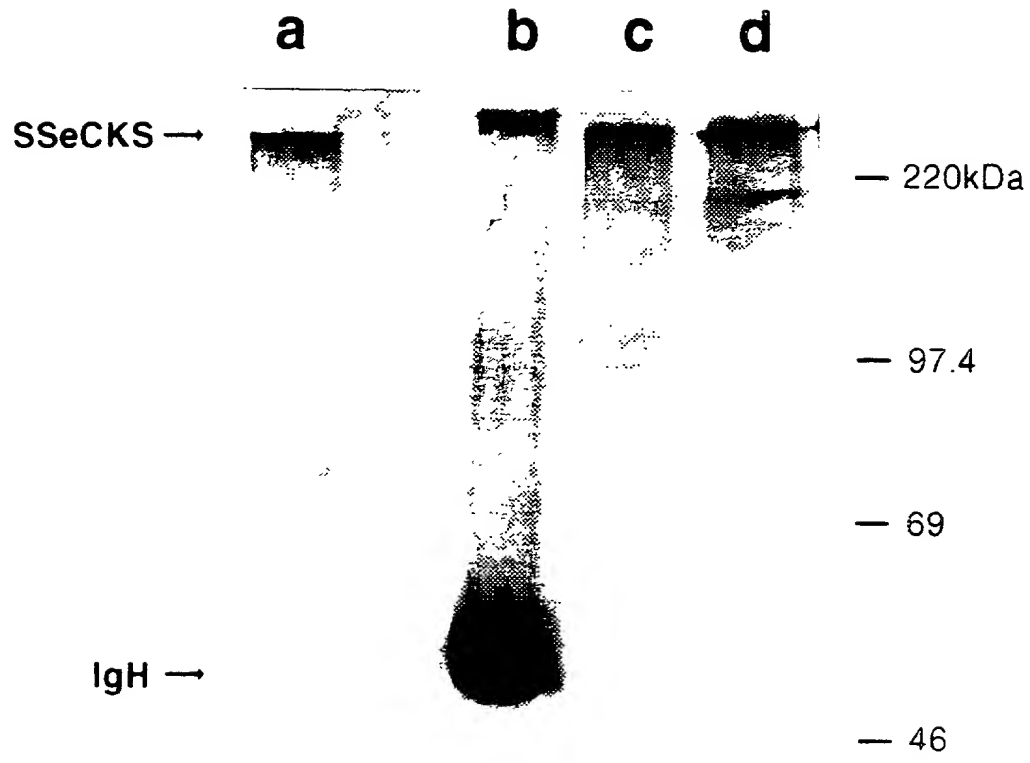


FIG.19

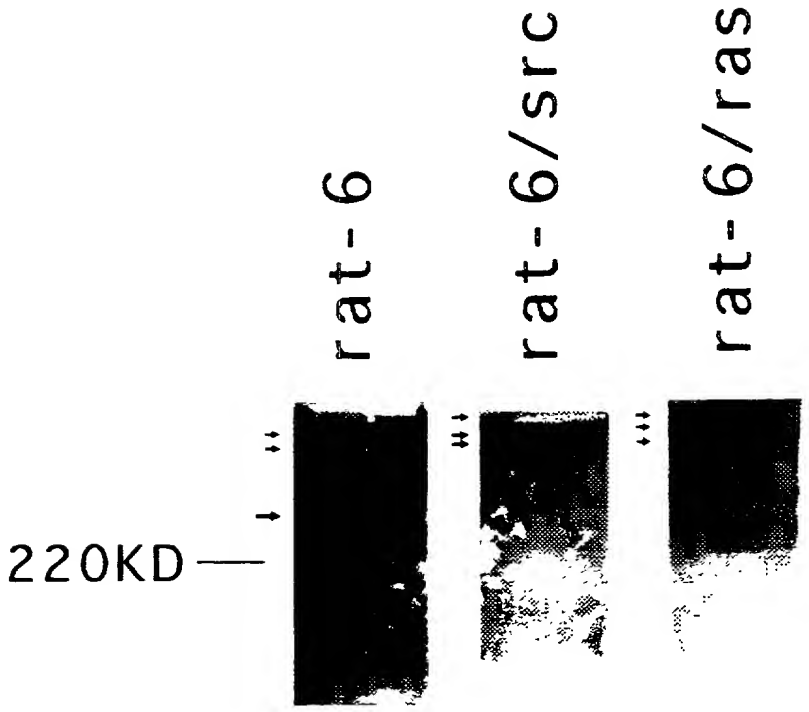


FIG.20

FIG.21A

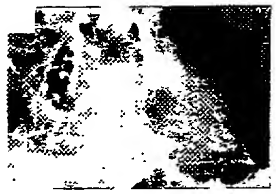


FIG.21B

FIG.21C

FIG.21D

FIG.21E

FIG.21F

FIG.21G

FIG.21H

FIG.21I

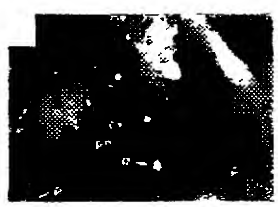


FIG.21J

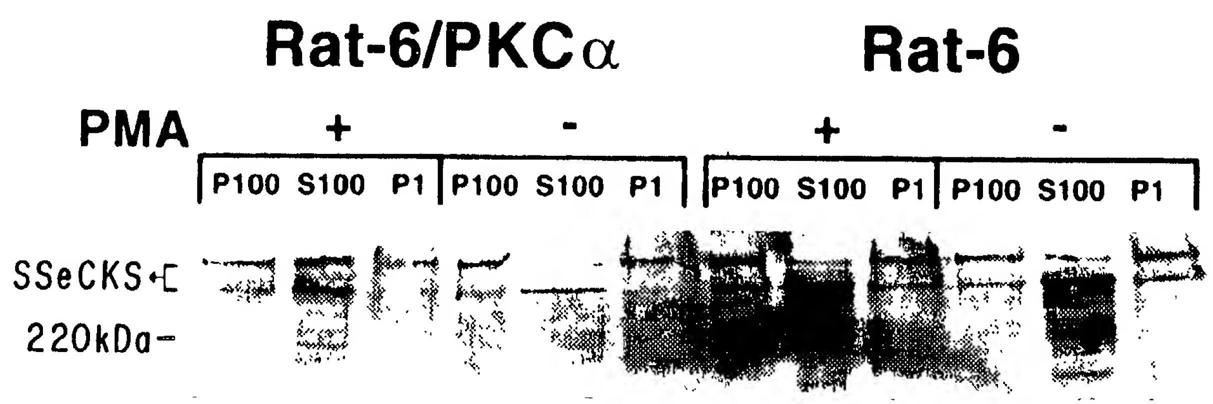

Rat-6/PKCα
Rat-6
PMA
+
-
+
-
P100 S100 P1
P100 S100 P1
P100 S100 P1
P100 S100 P1
SSeCKS
220kDa

FIG.22

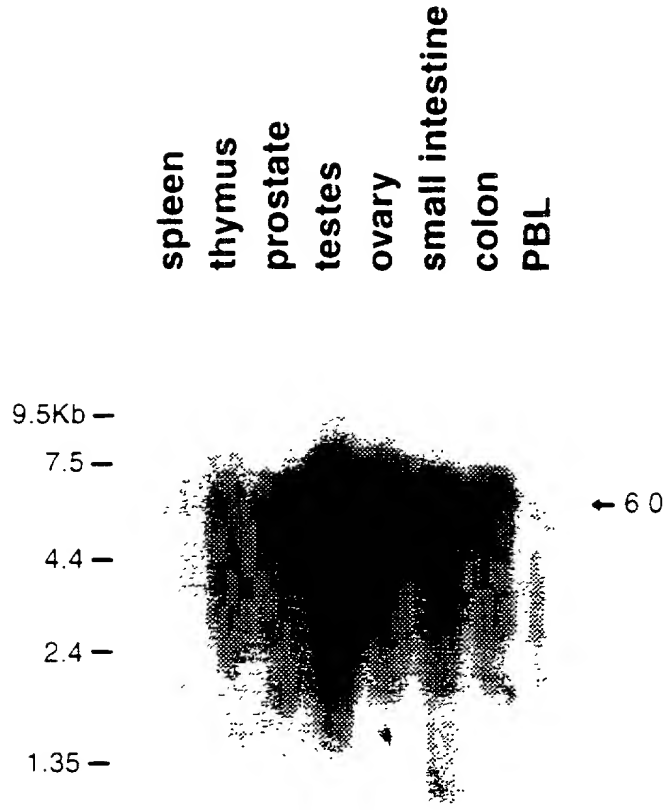


FIG.23A

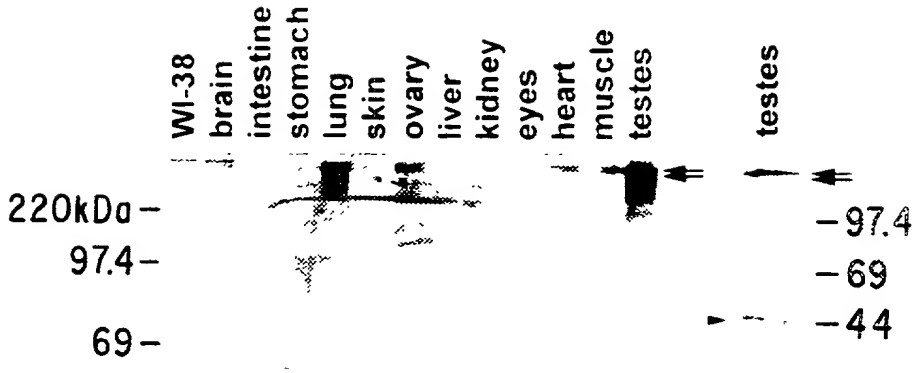


FIG.23B

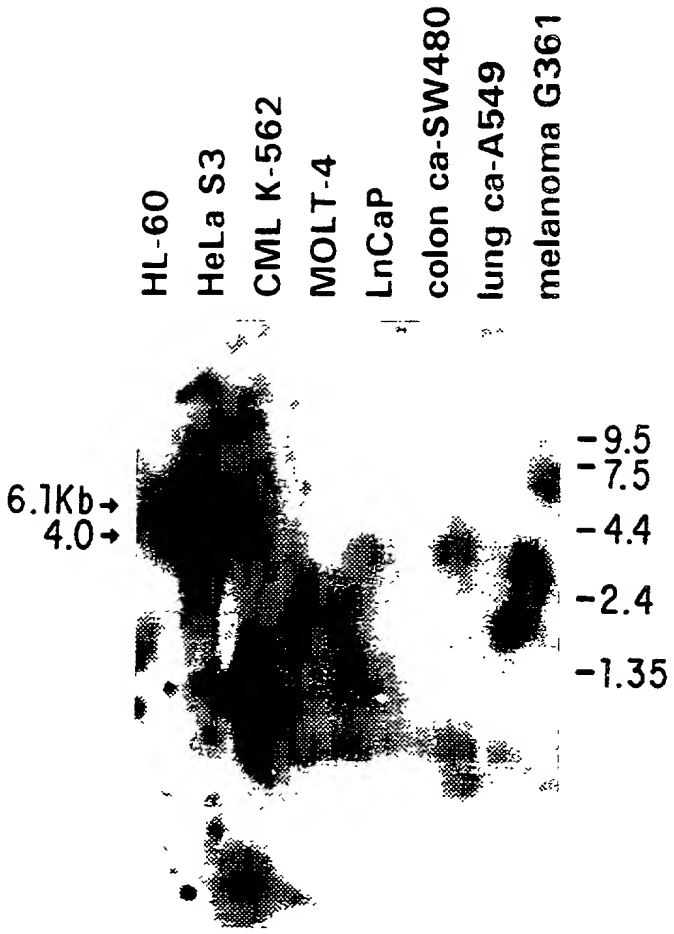

HL-60
HeLa S3
CML K-562
MOLT-4
LnCaP
colon ca-SW480
lung ca-A549
melanoma G361
6.1Kb
4.0
9.5
7.5
4.4
2.4
1.35

FIG.24

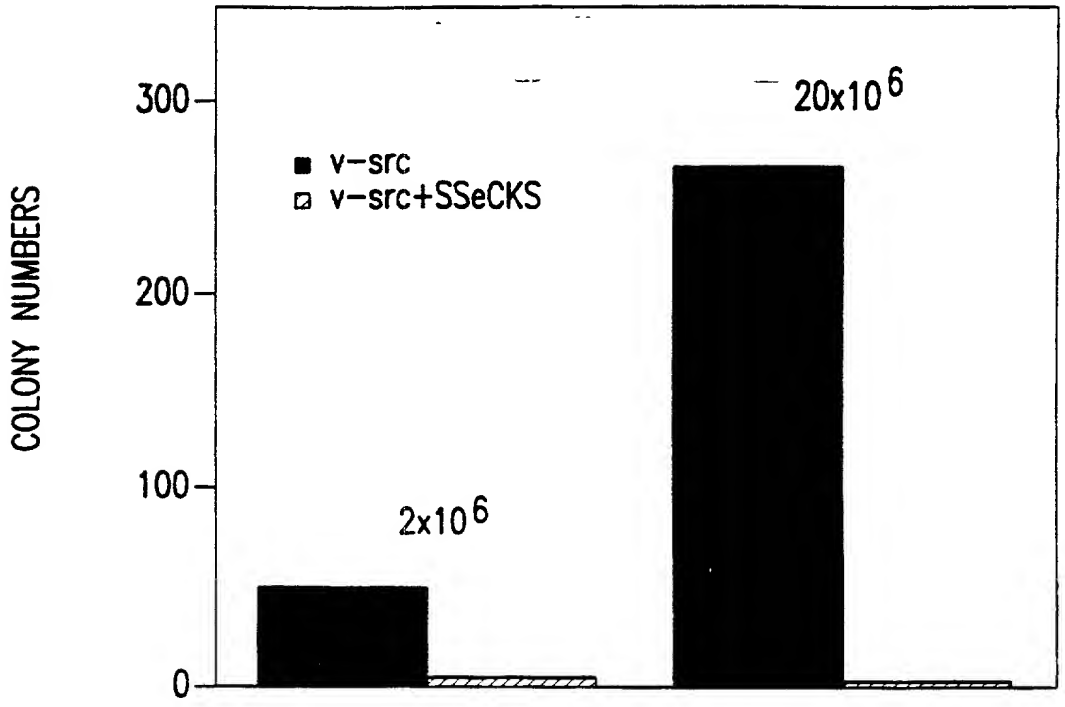


FIG.25A

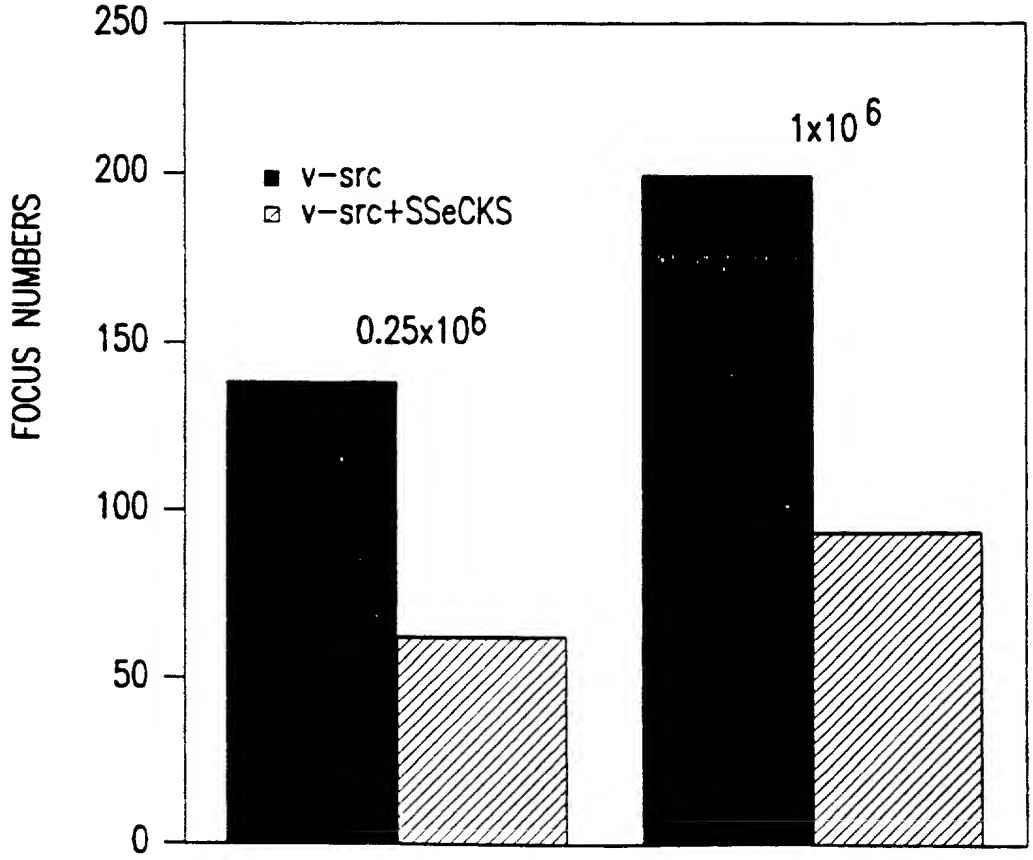


FIG.25B

		Myr.	Pal.
src	MGSSKSKPKD	+	−
yes	MGCIKSKEDK	+	+
SSeCKS	MGAGSSTEQR	+	?
$G_{\alpha t1}$	MGAGASAEEK	+	−
$G_{\alpha i1}$	MGCTLSAEDK	+	+
GAP−43	MLCCMRRTKQ	−	+
MYRIST. CONCENSUS:	MGXXX$^{S}/_{T}$		

FIG.26

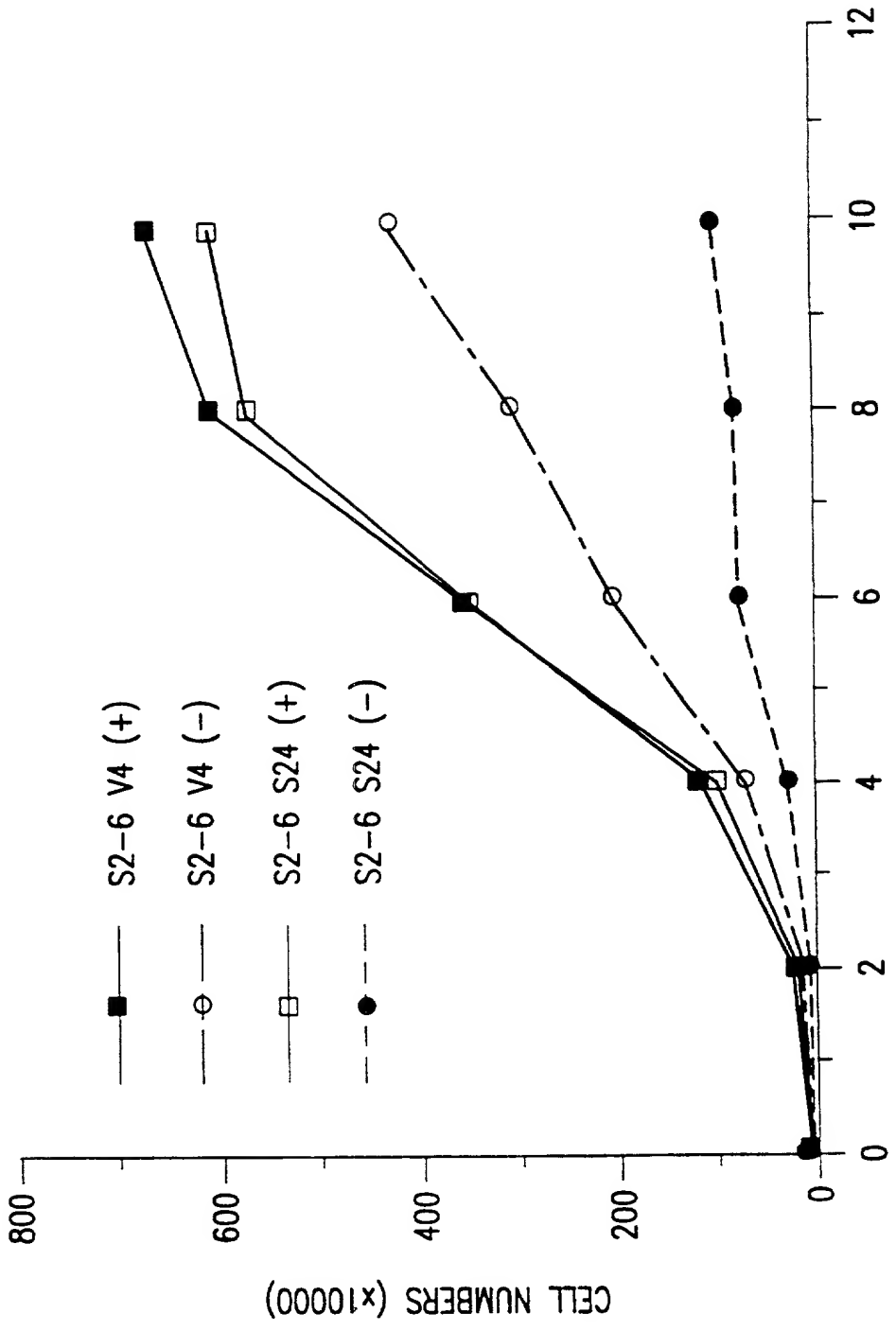

S2-6 V4 (+)
S2-6 V4 (-)
S2-6 S24 (+)
S2-6 S24 (-)
CELL NUMBERS (x10000)
DAYS
0
200
400
600
800
0
2
4
6
8
10
12

FIG.27

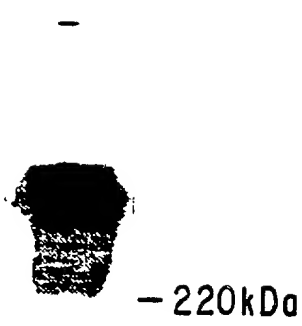


FIG.28

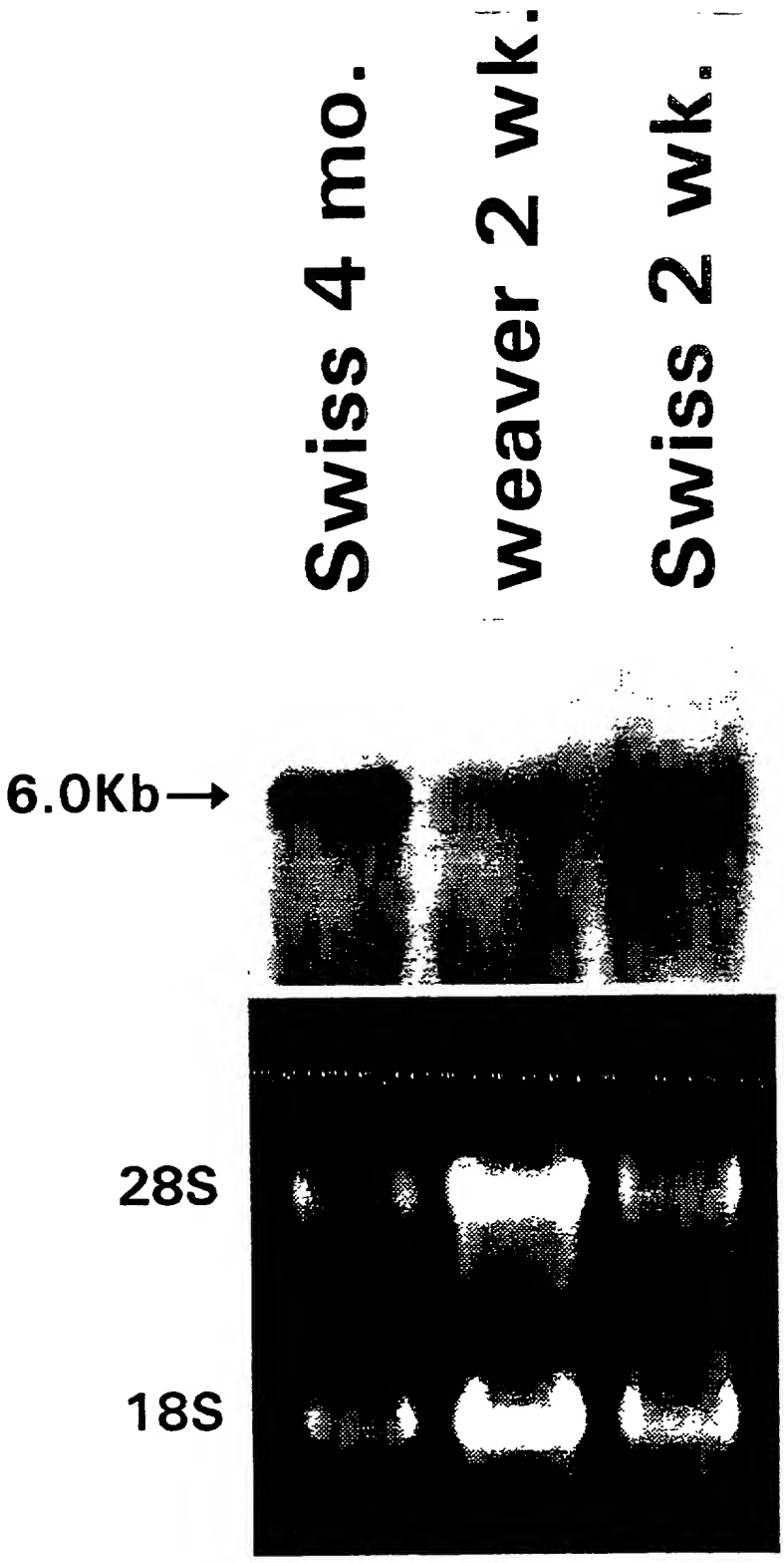


FIG.29

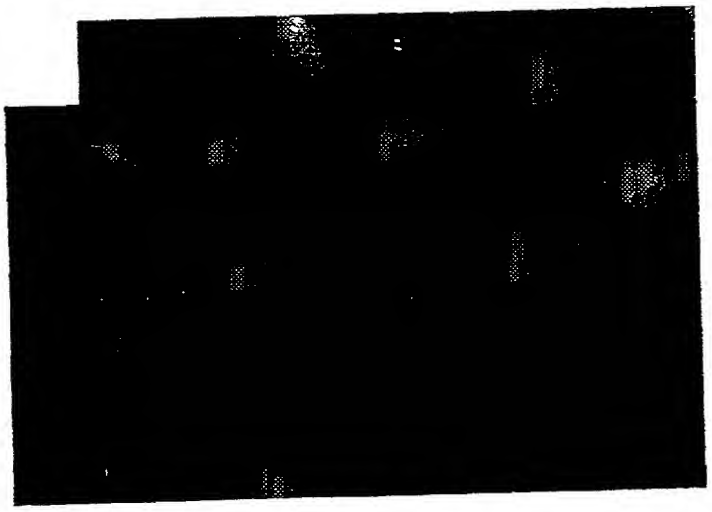


FIG.30A

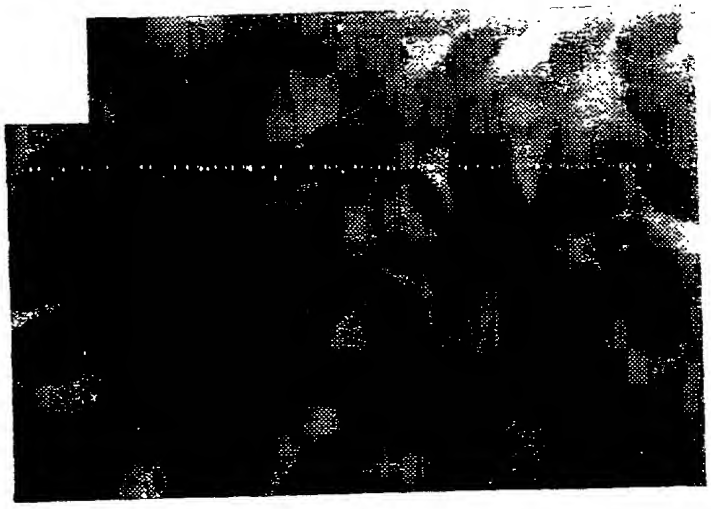


FIG.30B

FIG.30C

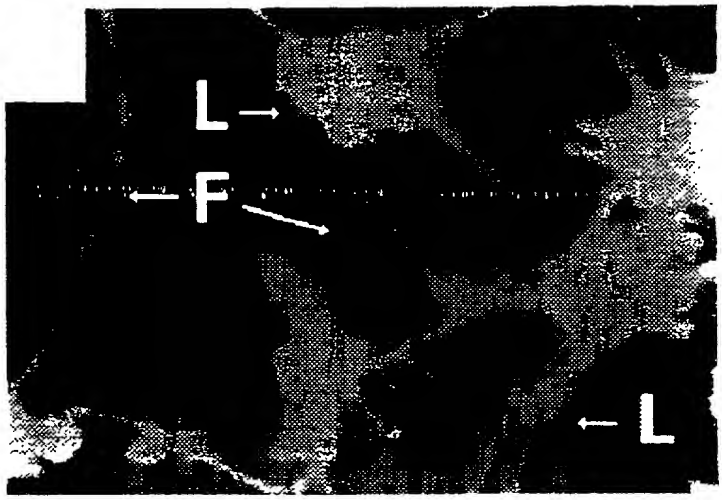


FIG.30D

FIG.31A

FIG.31B

FIG.31C

FIG.31D

FIG.32A

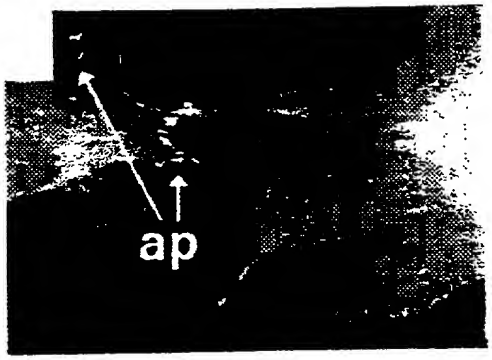


FIG.32B

FIG.32C

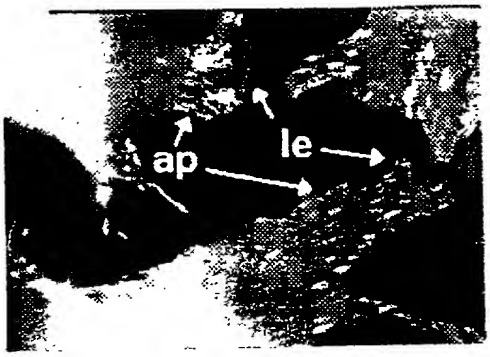


FIG.32D

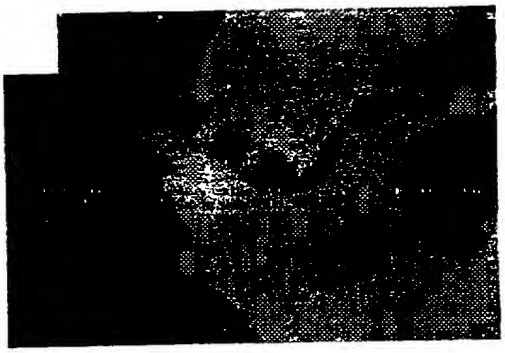


FIG.32E

FIG.32F

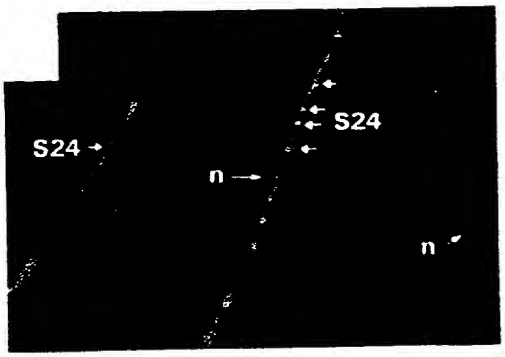


FIG.32G

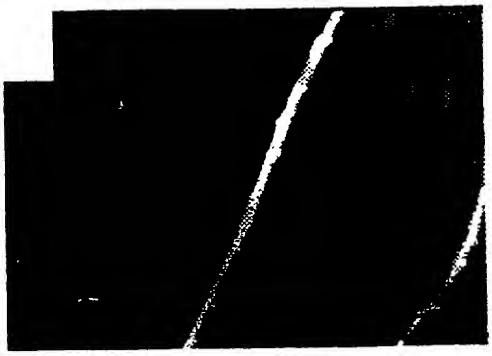


FIG.32H

FIG.33A

FIG.33B

FIG.33C

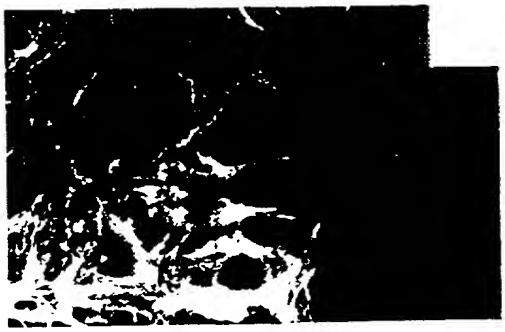


FIG.33D

FIG.33E

FIG.33F

FIG.33G

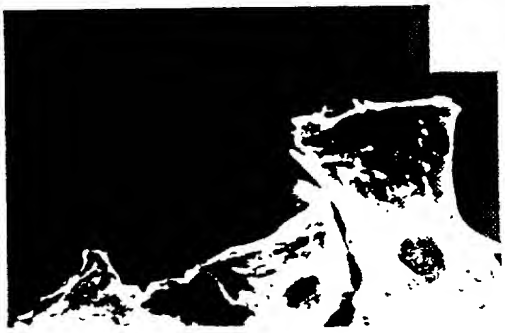


FIG.33H

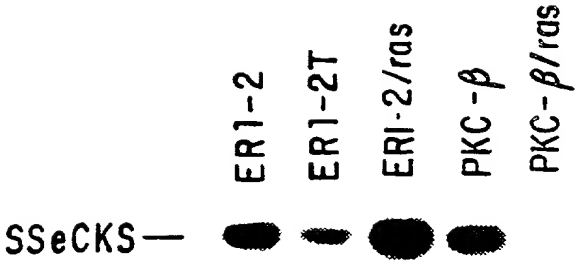


FIG.34

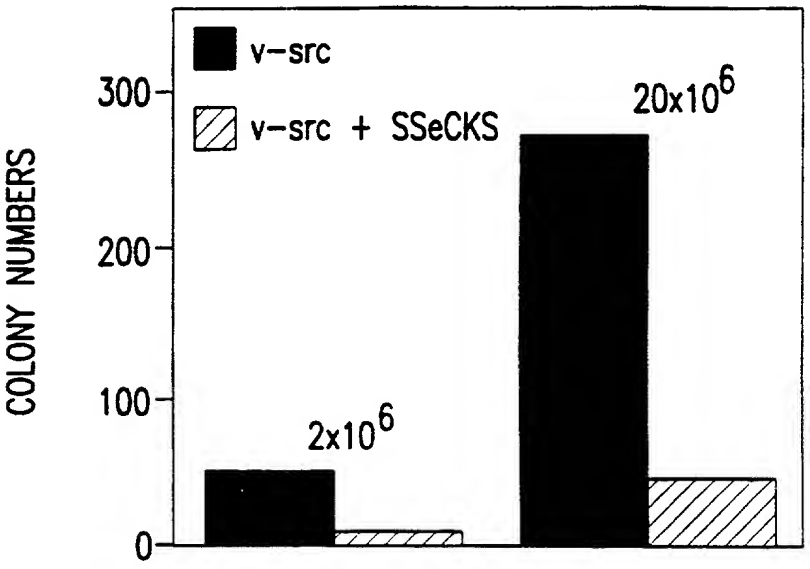


FIG.35A

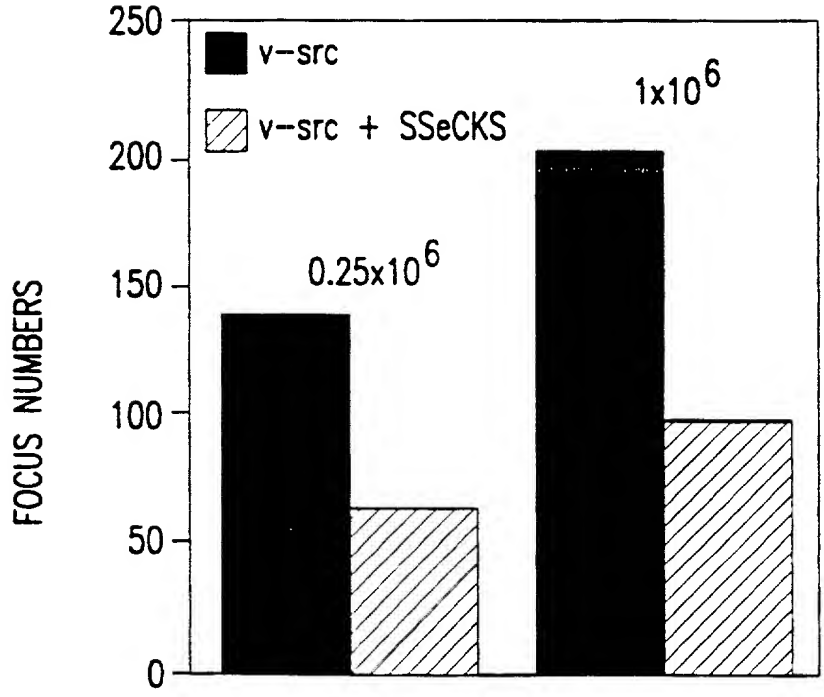


FIG.35B

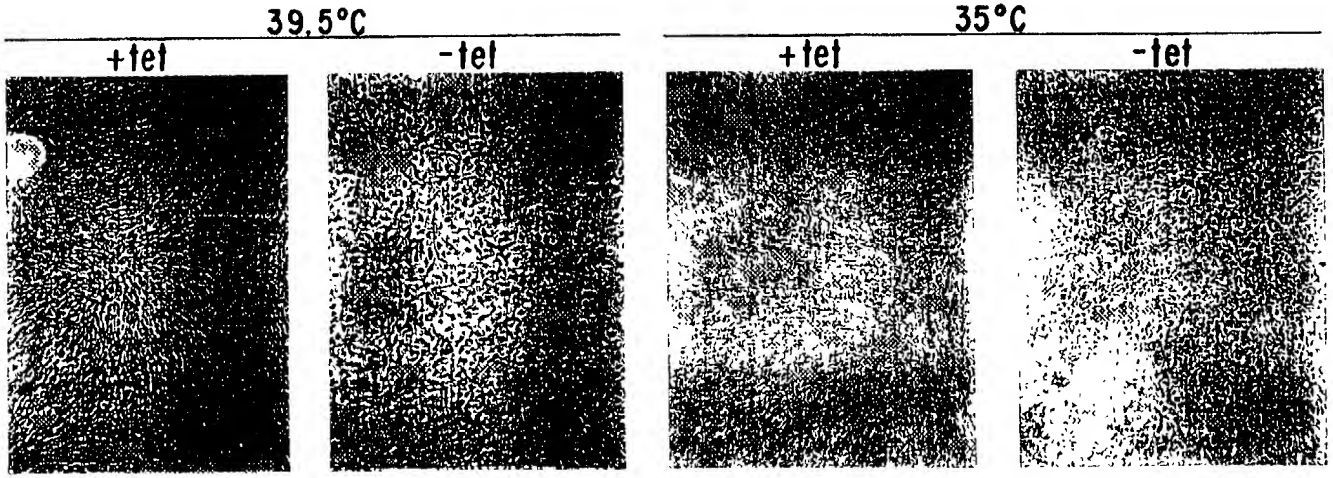


FIG.36A-1 FIG.36A-2 FIG.36A-3 FIG.36A-4

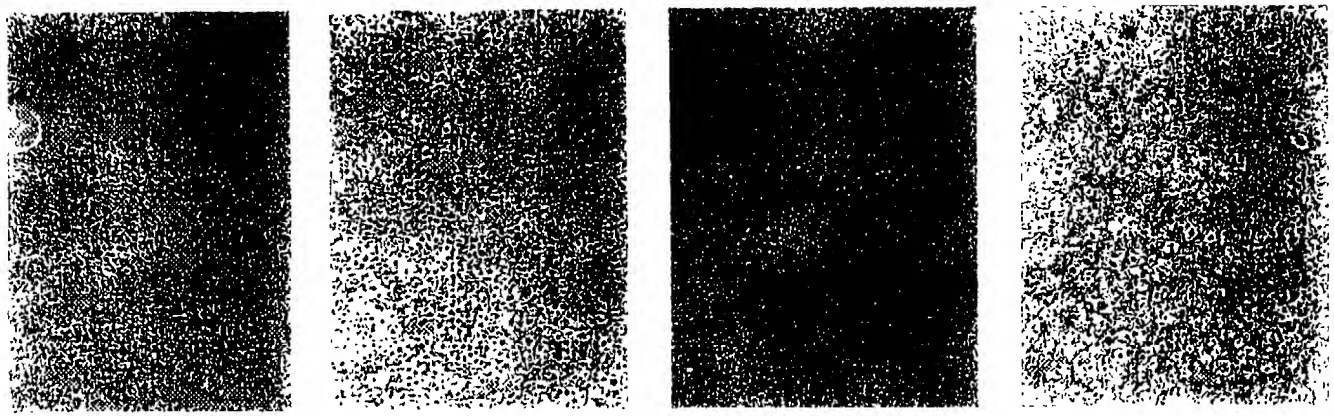


FIG.36A-5 FIG.36A-6 FIG.36A-7 FIG.36A-8

FIG.36B-1

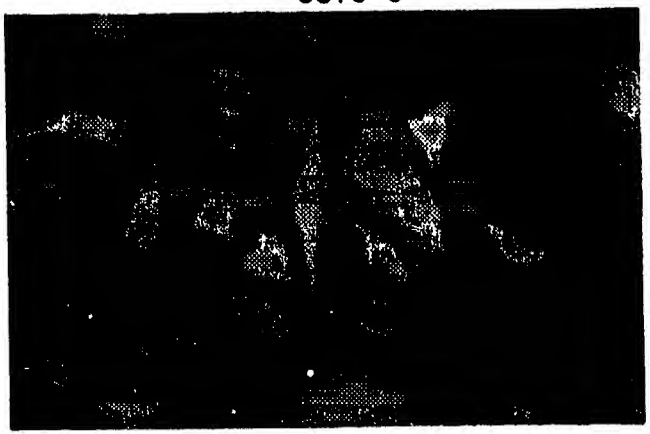


FIG.36B-2

FIG.36B-3

FIG.36B-4

FIG.37A-1

FIG.37A-2

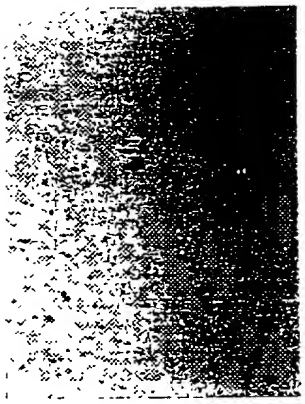


FIG.37A-3

FIG.37A-4

SOFT AGAR COLONY FORMATION						
	ts src1	ts src2	ts src3	ts src4	pLJ2	pLJ3
+ tet	2160	1640	2800	1080	0	0
− tet	60	60	110	35	0	0

FIG.37B

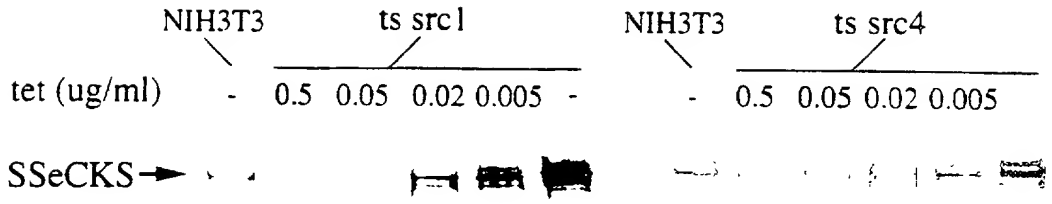


FIG.38A

FIG.38C-1 FIG.38C-2

SOFT AGAR COLONY FORMATION							
	35°C					39°C	
tet(ug/ml)	0.5	0.05	0.02	0.005	0	0.5	0
ts src1	2852	2464	174	51	22	0	0
ts src4	1463	743	67	11	0	0	0

FIG.38B

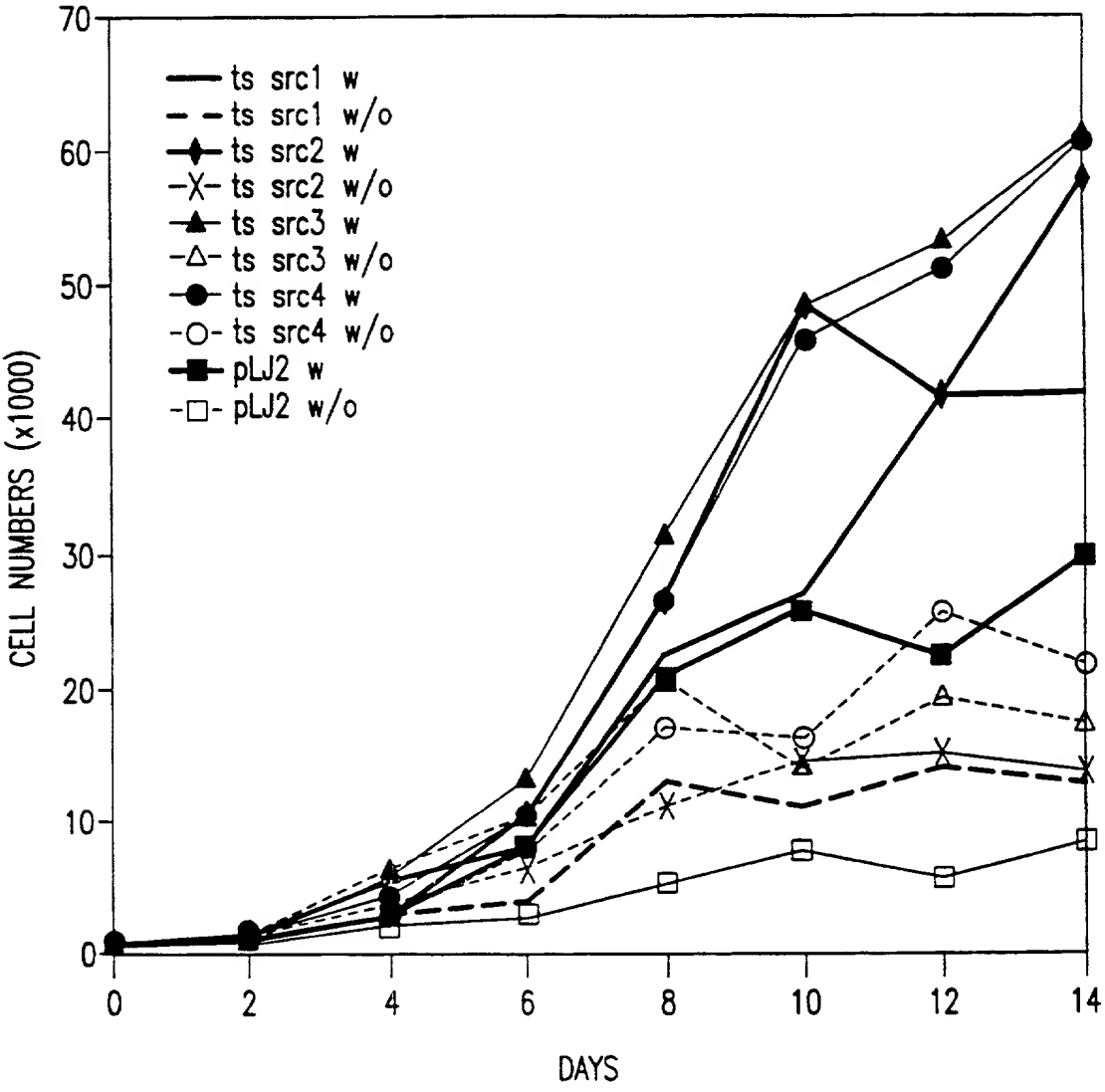

70
60
50
40
30
20
10
0
CELL NUMBERS (x1000)
ts src1 w
ts src1 w/o
ts src2 w
ts src2 w/o
ts src3 w
ts src3 w/o
ts src4 w
ts src4 w/o
pLJ2 w
pLJ2 w/o
0
2
4
6
8
10
12
14
DAYS

FIG.39A

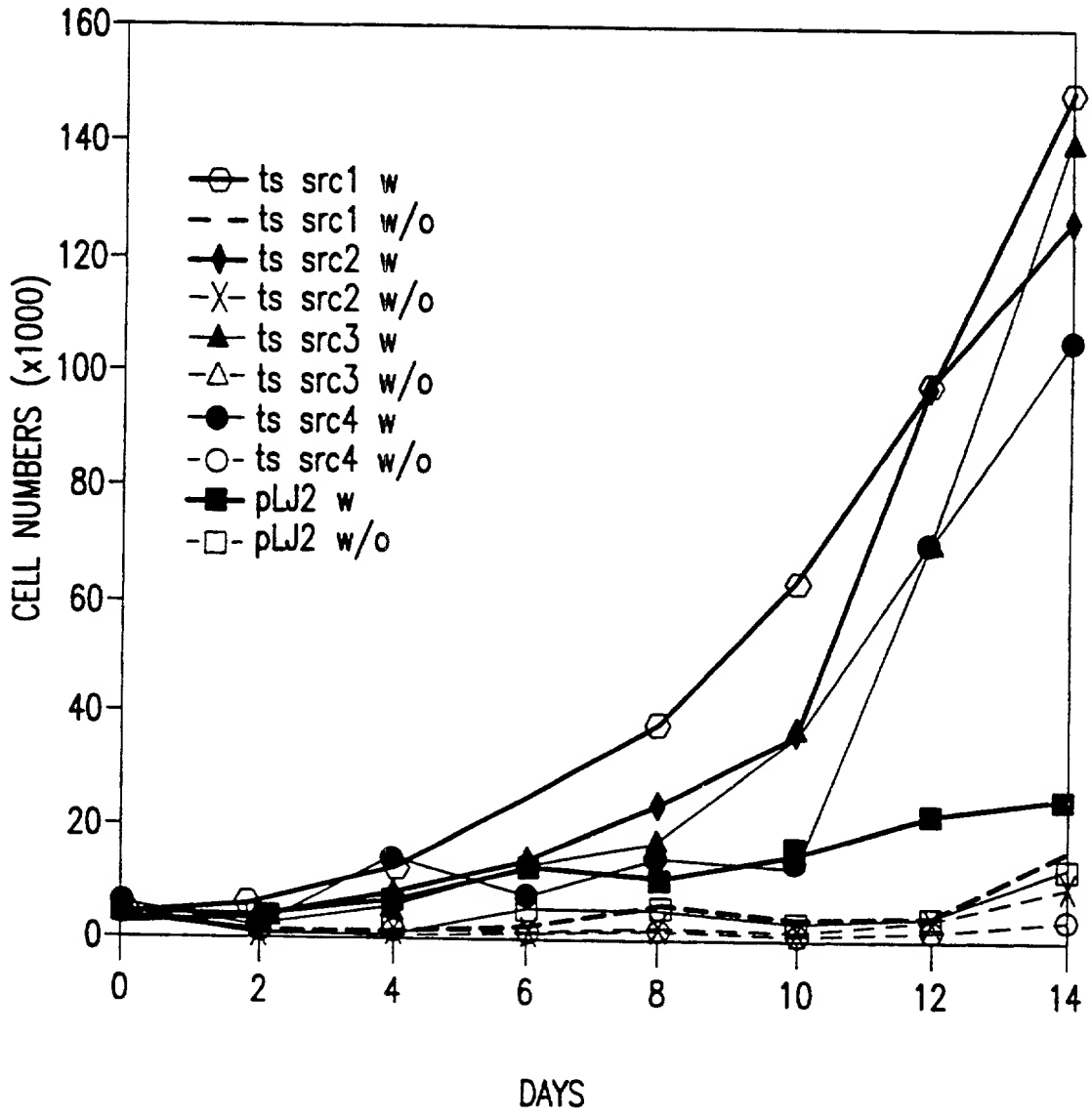

160
140
120
100
80
60
40
20
0
CELL NUMBERS (x1000)
ts src1 w
ts src1 w/o
ts src2 w
ts src2 w/o
ts src3 w
ts src3 w/o
ts src4 w
ts src4 w/o
pLJ2 w
pLJ2 w/o
0
2
4
6
8
10
12
14
DAYS

FIG.39B

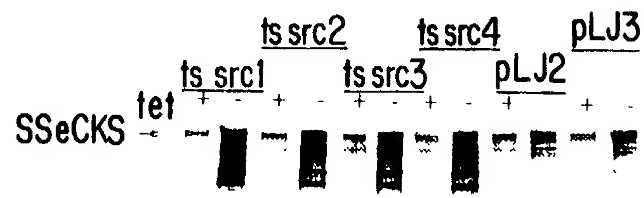


FIG.40A

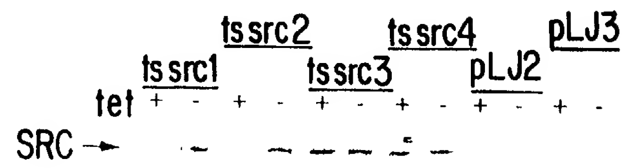


FIG.40B

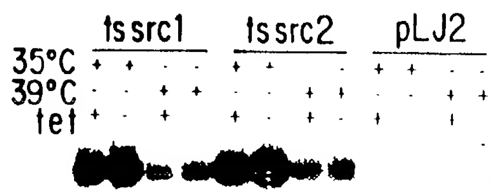


FIG.40C-1

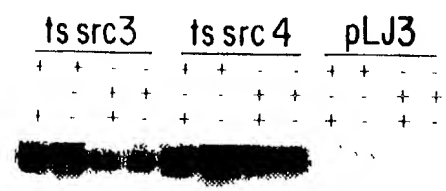


FIG.40C-2

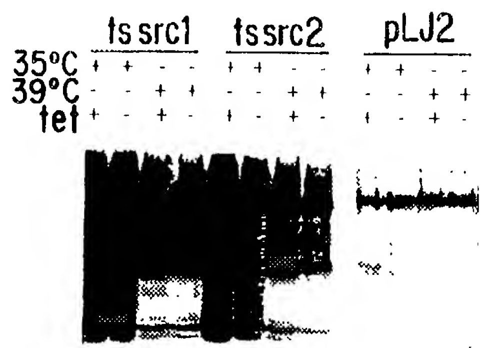


FIG.40D-1

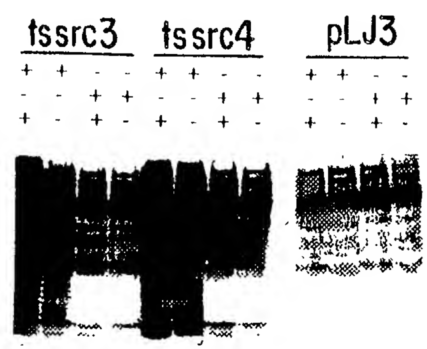


FIG.40D-2

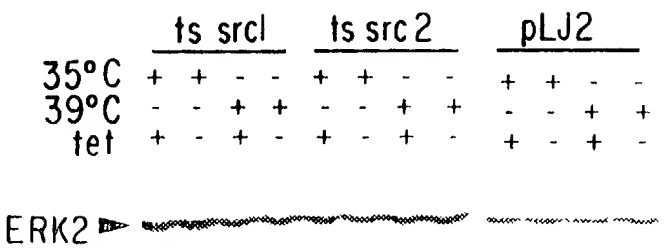


FIG.41A-1

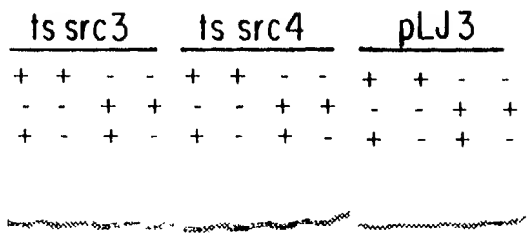


FIG.41A-2

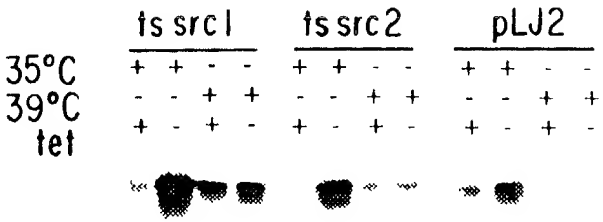


FIG.41B-1

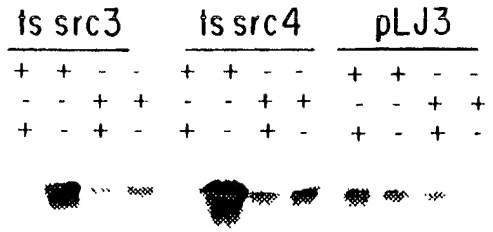


FIG.41B-2

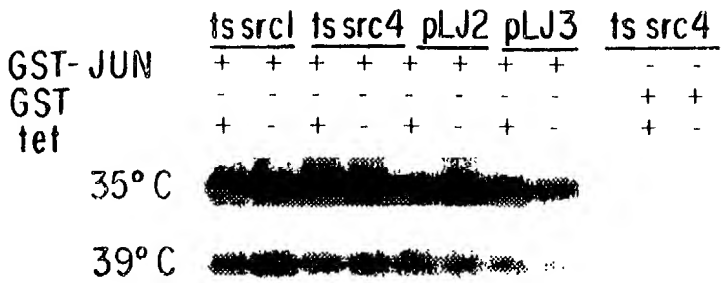


FIG.41C

(as of 89)

SSeCKS

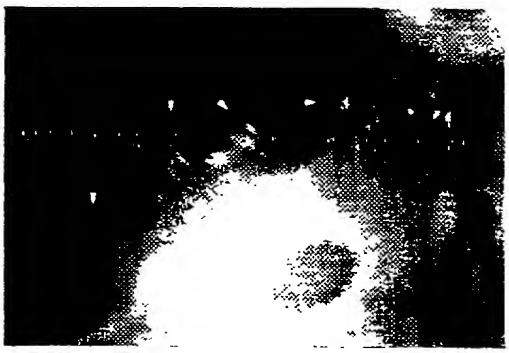
FIG.42A-1

Vinculin

35°C
+tet

FIG.42A-2

FIG.42A-3



35°C
-tet

FIG.42A-4

SSeCKS

FIG.42A-5

Vinculin

FIG.42A-6

FIG.42A-7

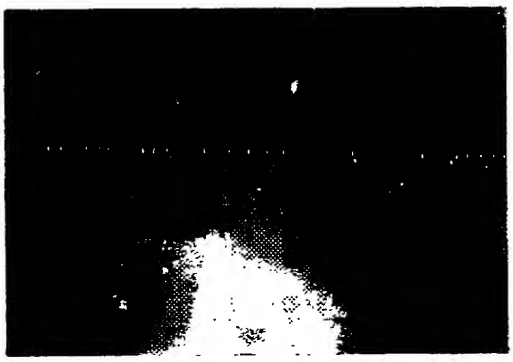


FIG.42A-8

SSeCKS

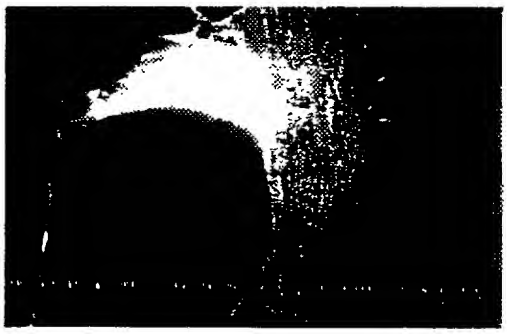
FIG.42B-1

Phalloidin

35°C
+tet

FIG.42B-2

FIG.42B-3



35°C
−tet

FIG.42B-4

SSeCKS

FIG.42B-5

Phalloidin

FIG.42B-6

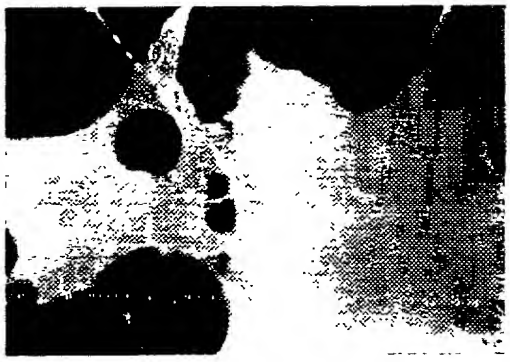


FIG.42B-7

FIG.42B-8

Figure 43

(73 of 90)

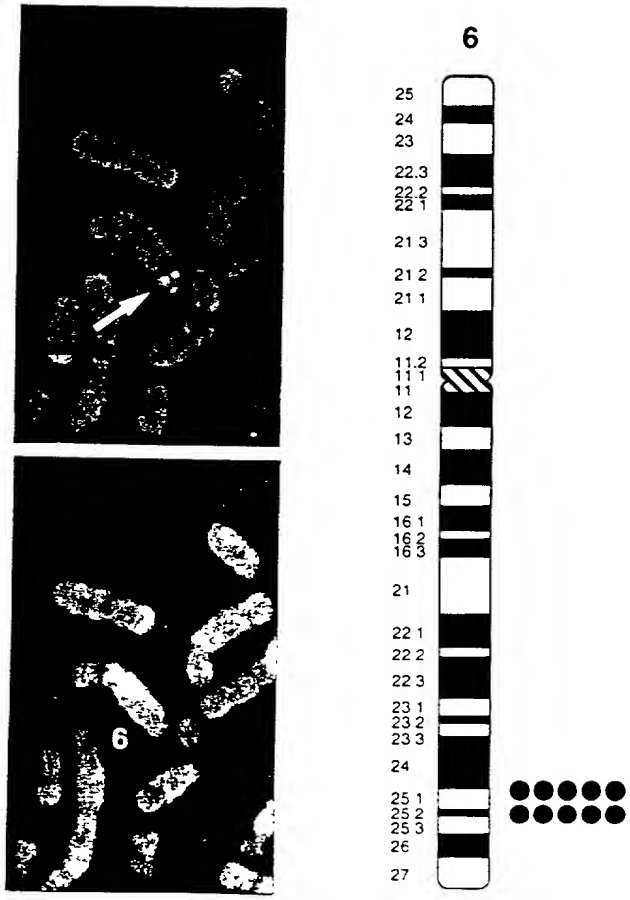


Figure 44

(74 of 90)

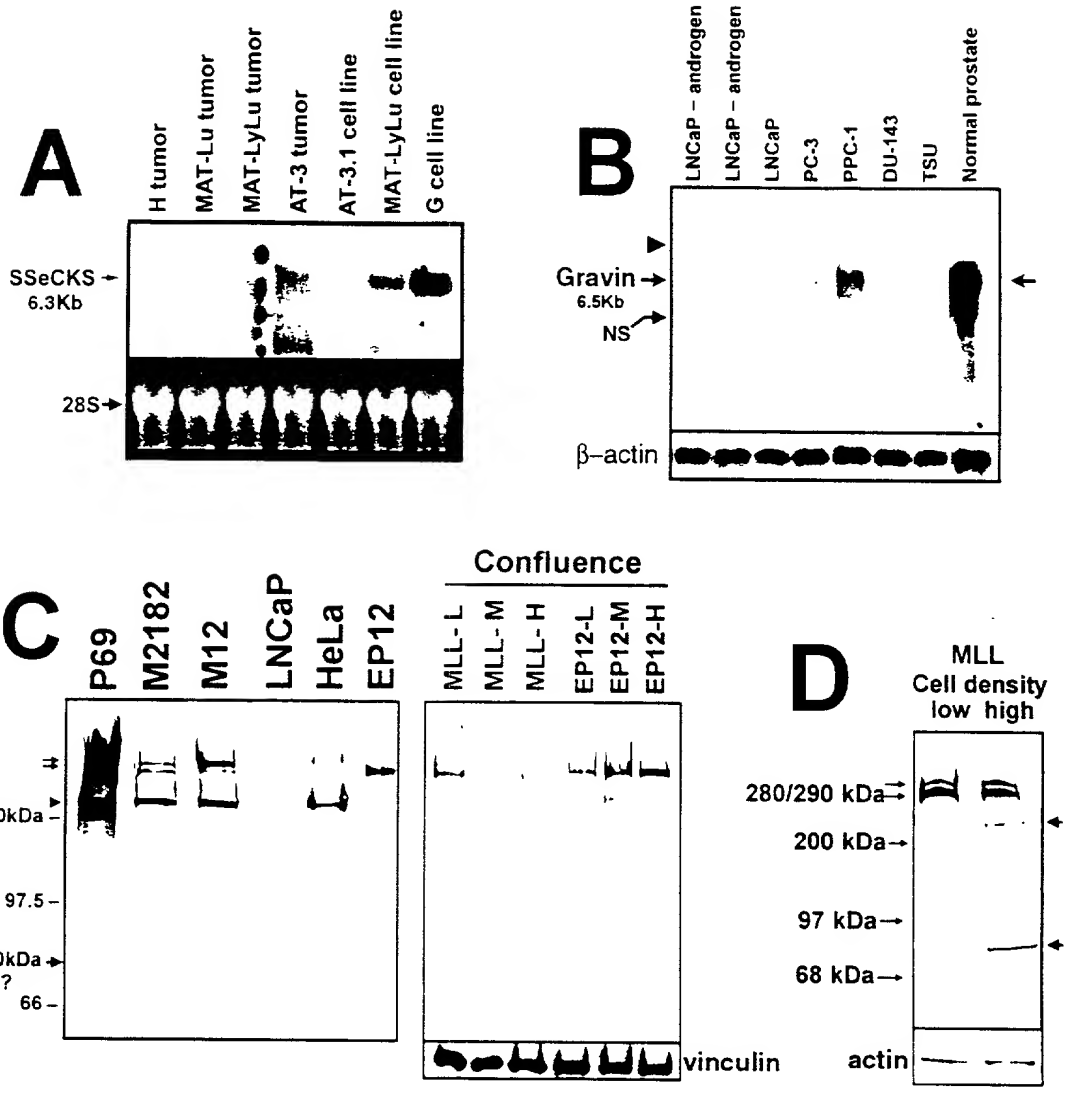


Figure 45

(75 of 90)

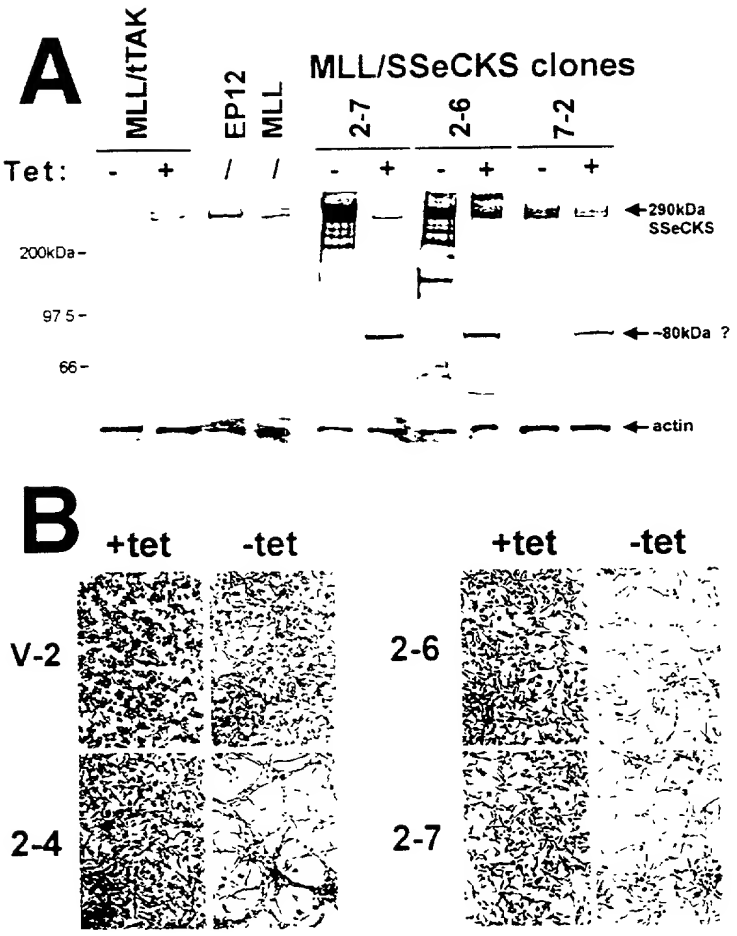
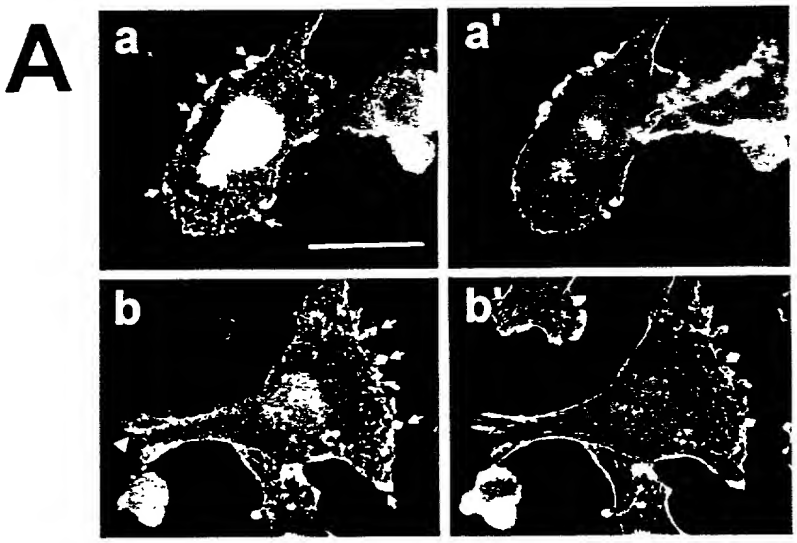
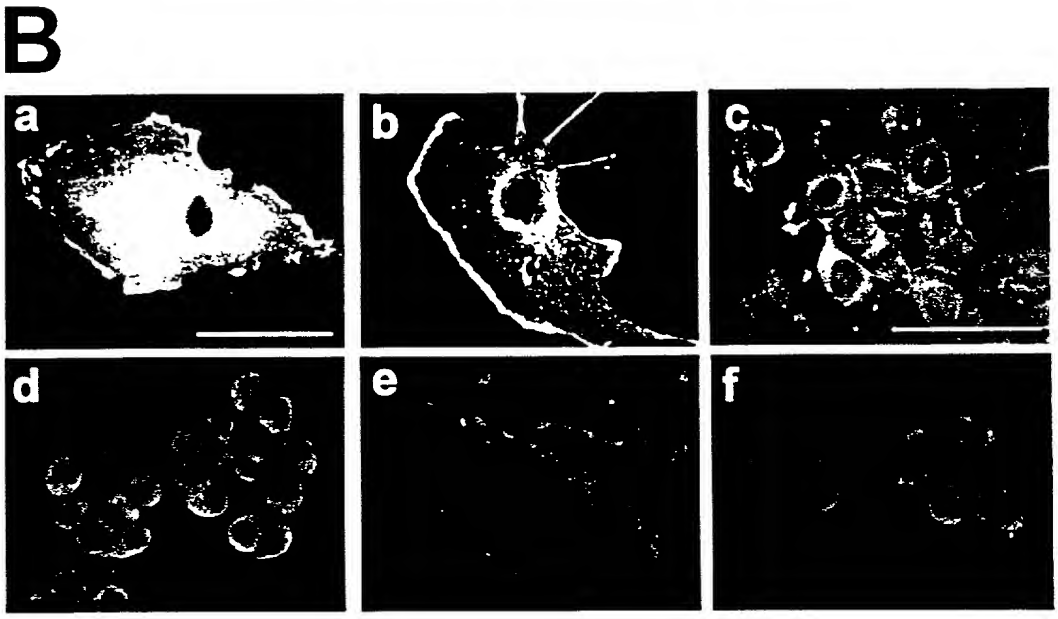


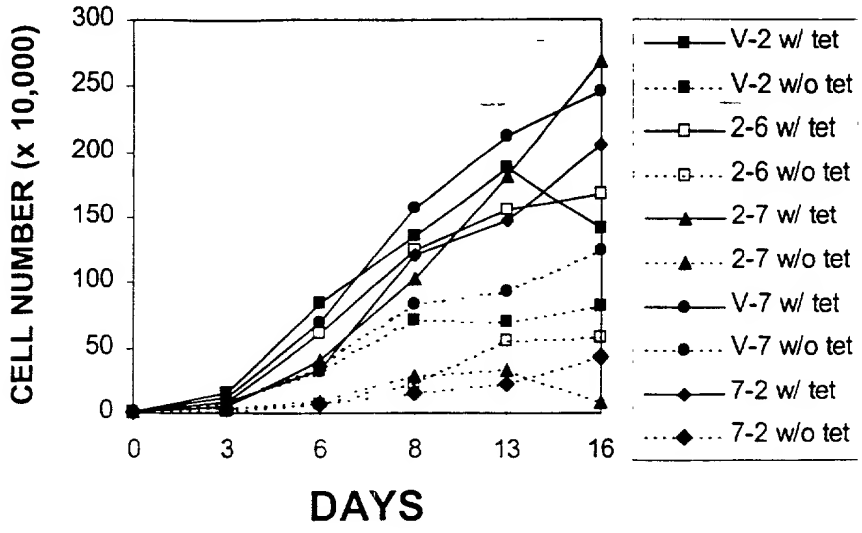
Figure 46

(76 of 90)

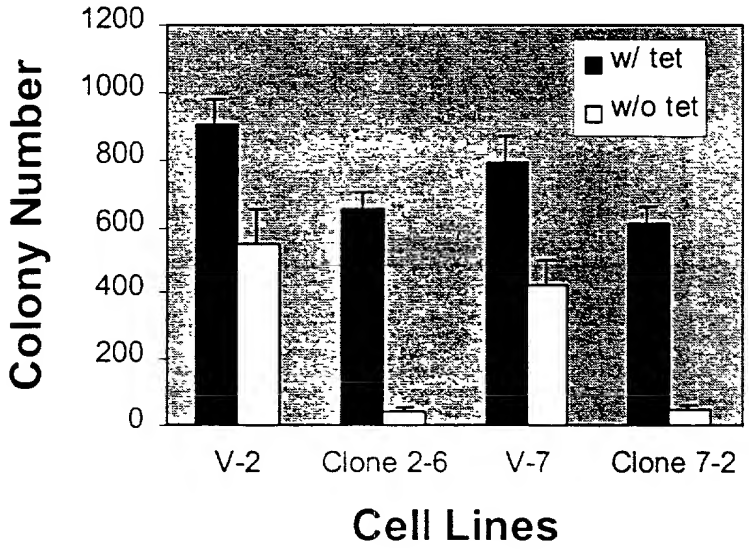




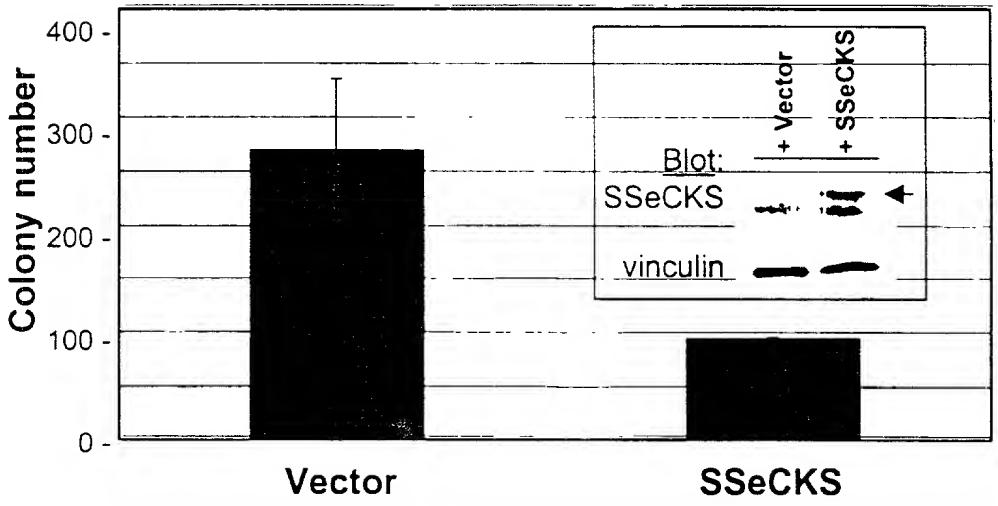
A

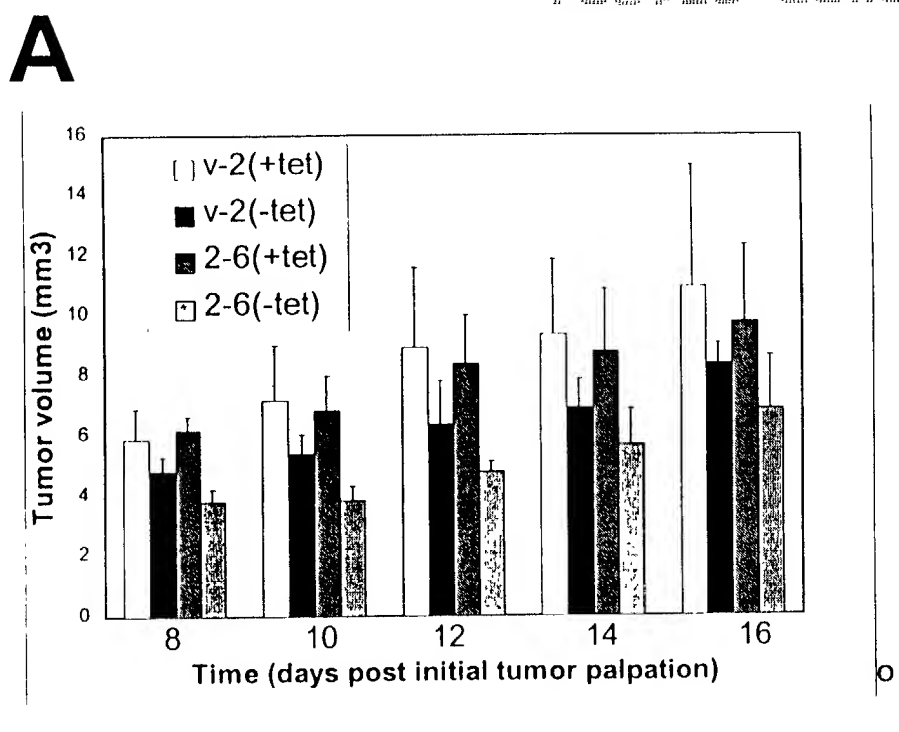

CELL NUMBER (x 10,000)
300
250
200
150
100
50
0
0
3
6
8
13
16
DAYS
V-2 w/ tet
V-2 w/o tet
2-6 w/ tet
2-6 w/o tet
2-7 w/ tet
2-7 w/o tet
V-7 w/ tet
V-7 w/o tet
7-2 w/ tet
7-2 w/o tet

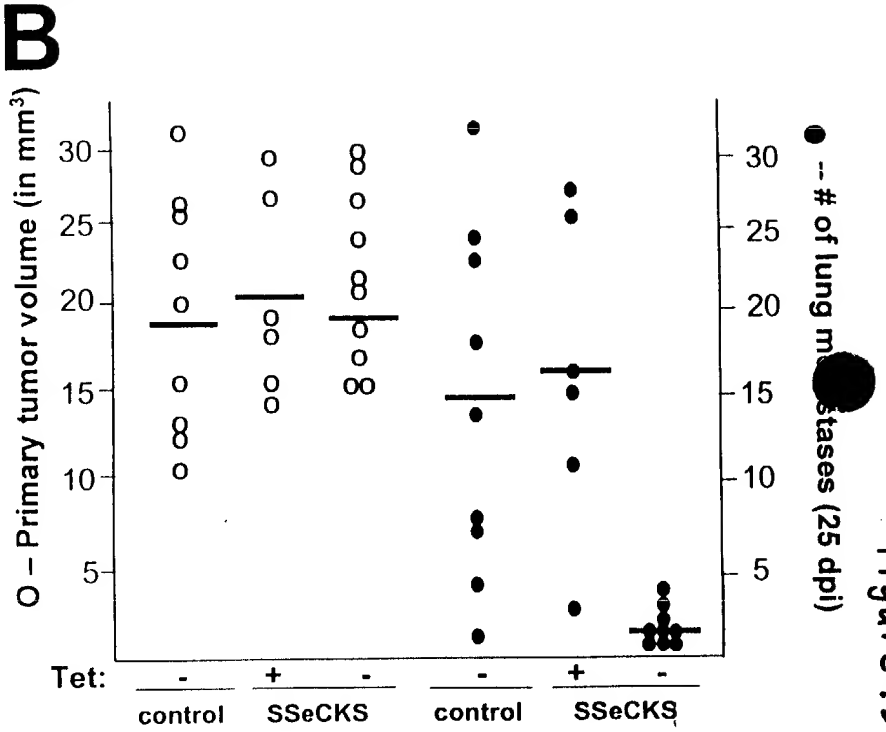
B

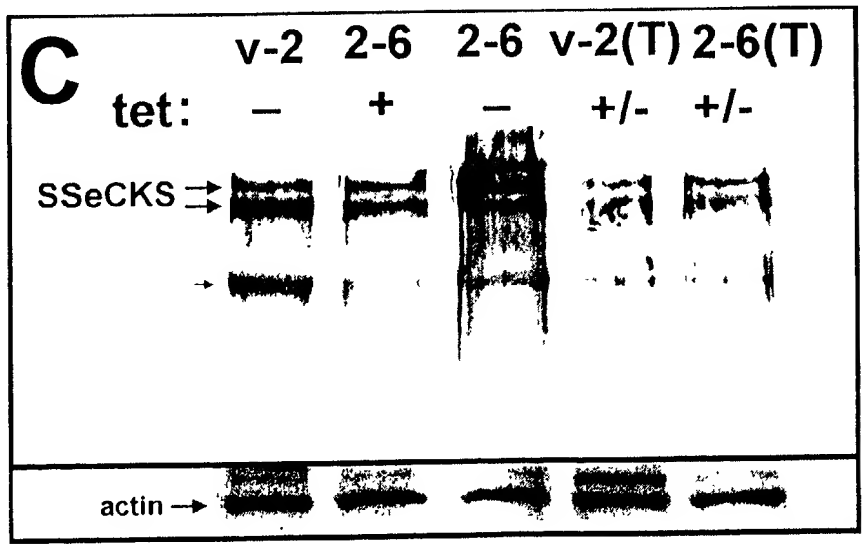

Colony Number
1200
1000
800
600
400
200
0
w/ tet
w/o tet
V-2
Clone 2-6
V-7
Clone 7-2
Cell Lines

C


Colony number
400
300
200
100
0
+ Vector
+ SSeCKS
Blot:
SSeCKS
vinculin
Vector
SSeCKS







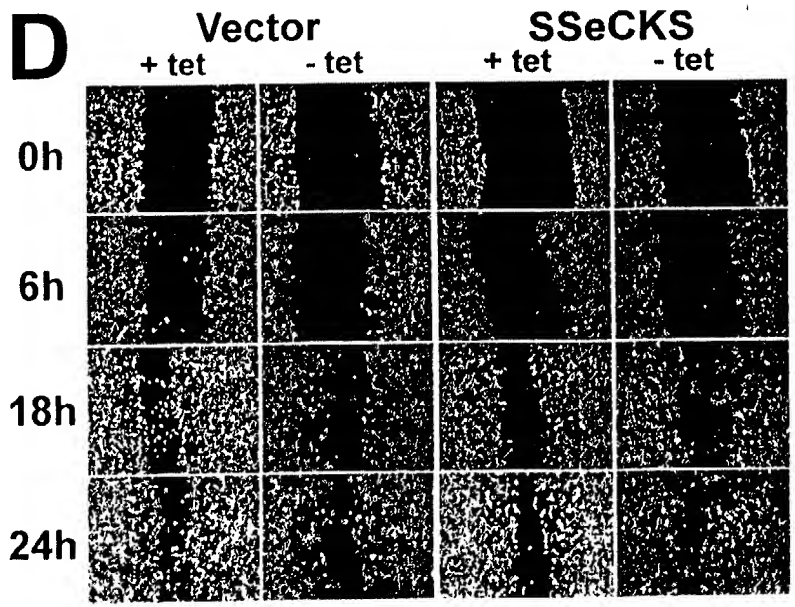


Figure 48 (78 of 90)

Figure 49

(79 of 90)

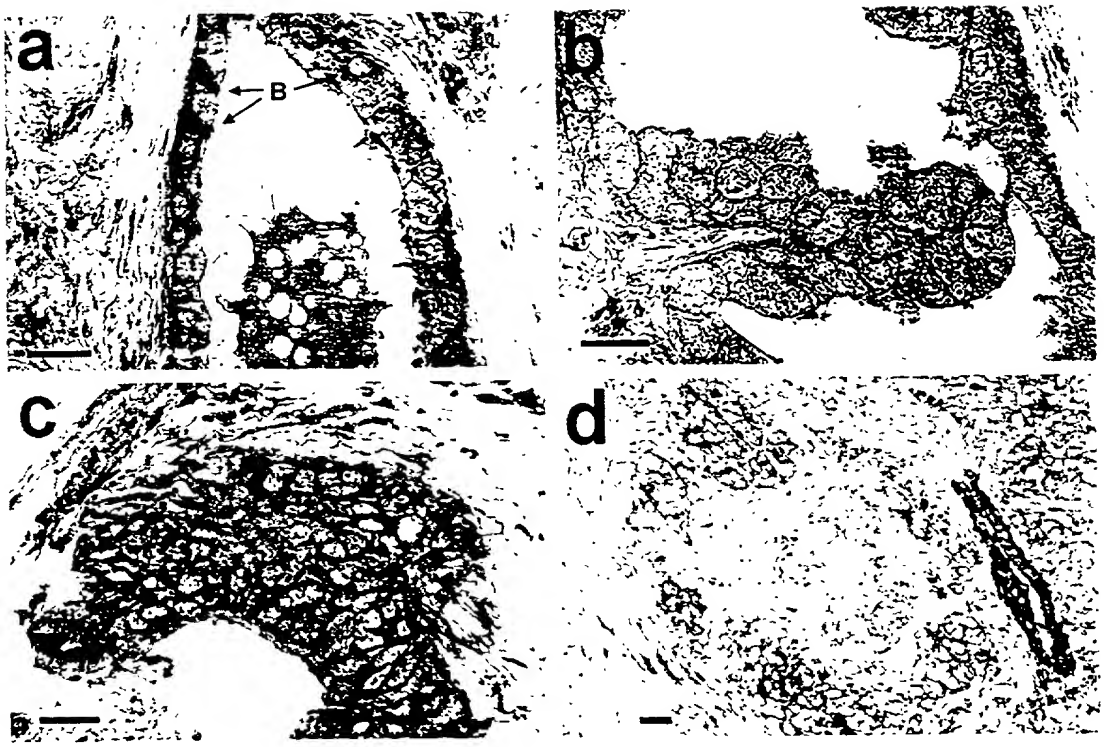
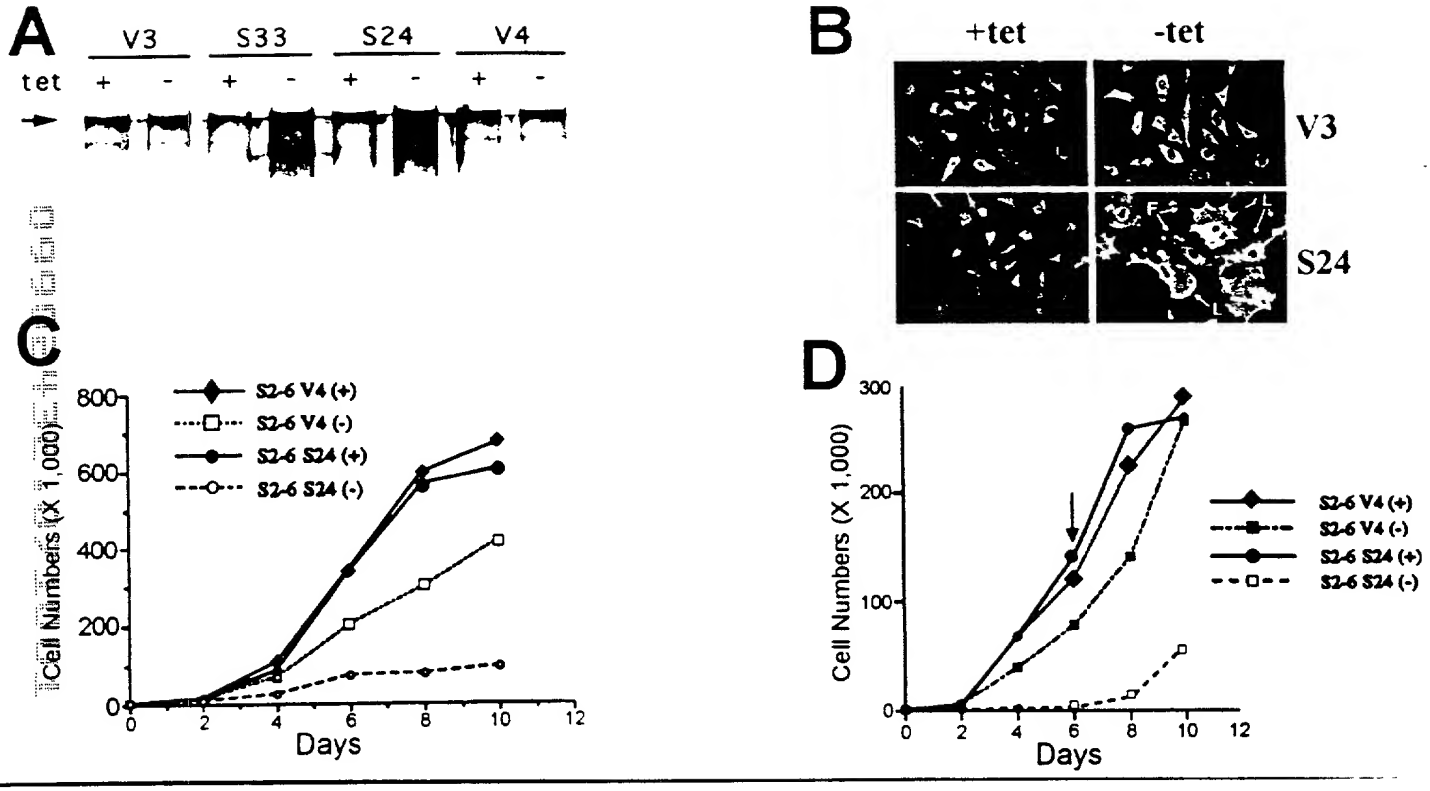


Figure 50

(80 of 90)



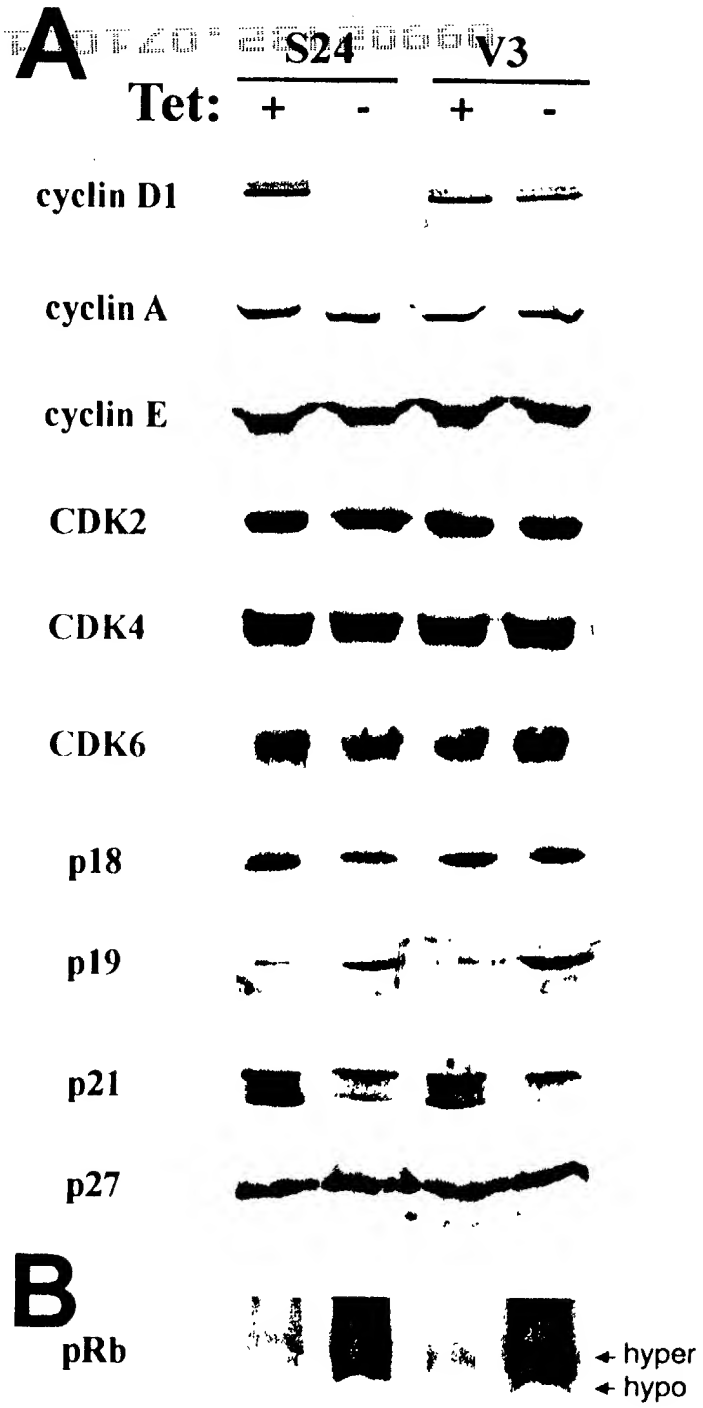


Figure 51
(81 of 90)

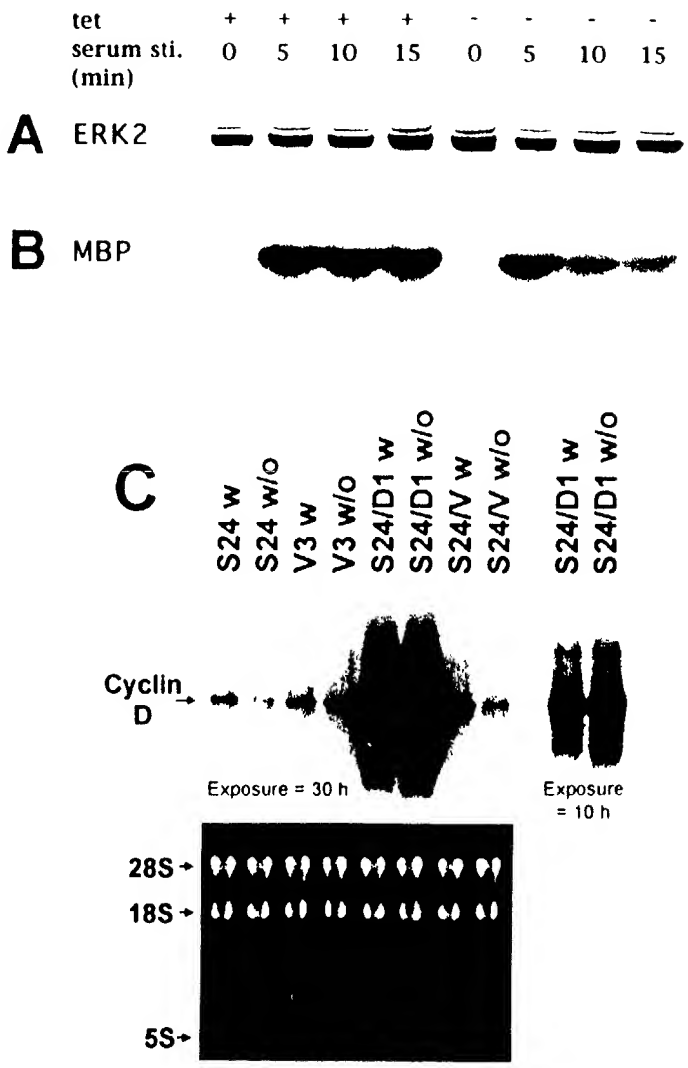
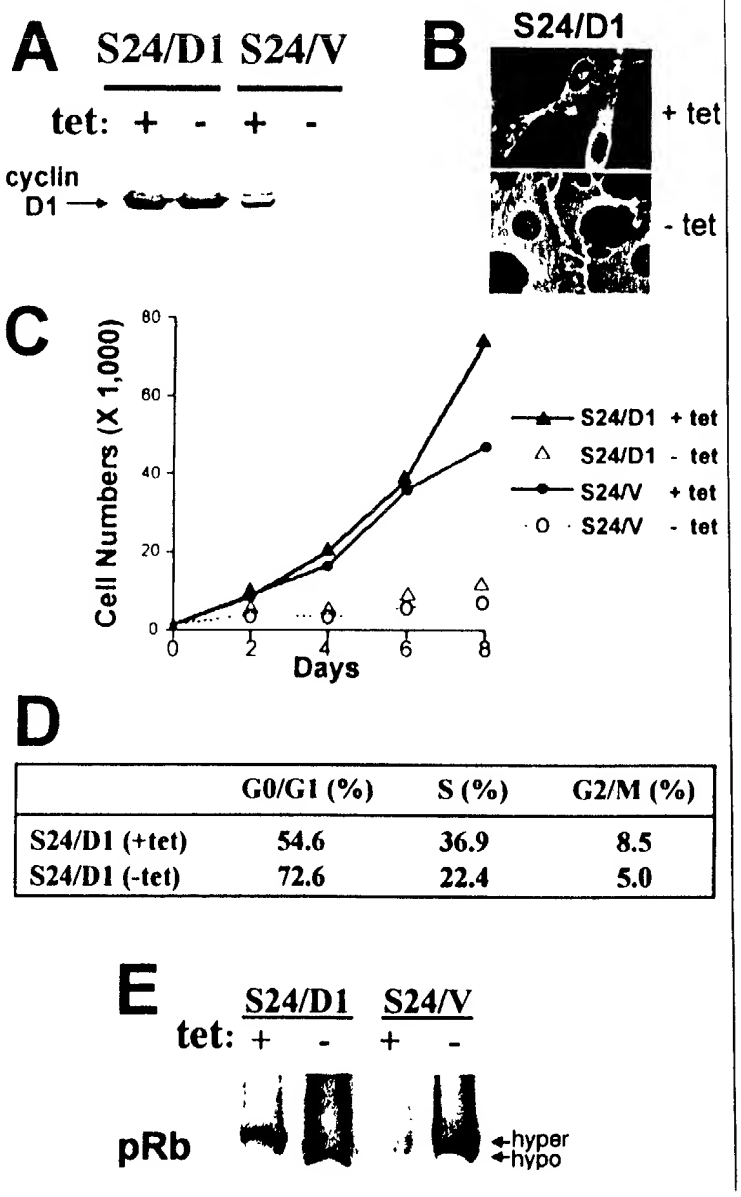


Figure 52

(82 of 90)



	G0/G1 (%)	S (%)	G2/M (%)
S24/D1 (+tet)	54.6	36.9	8.5
S24/D1 (-tet)	72.6	22.4	5.0

Figure 53

(83 of 90)

Figure 54

(84 of 90)

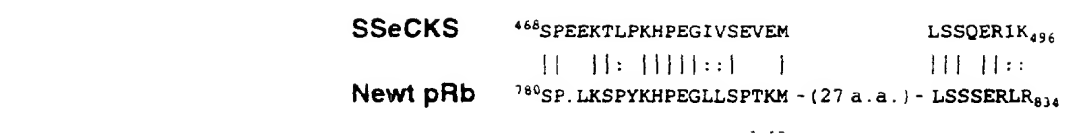


Figure 55

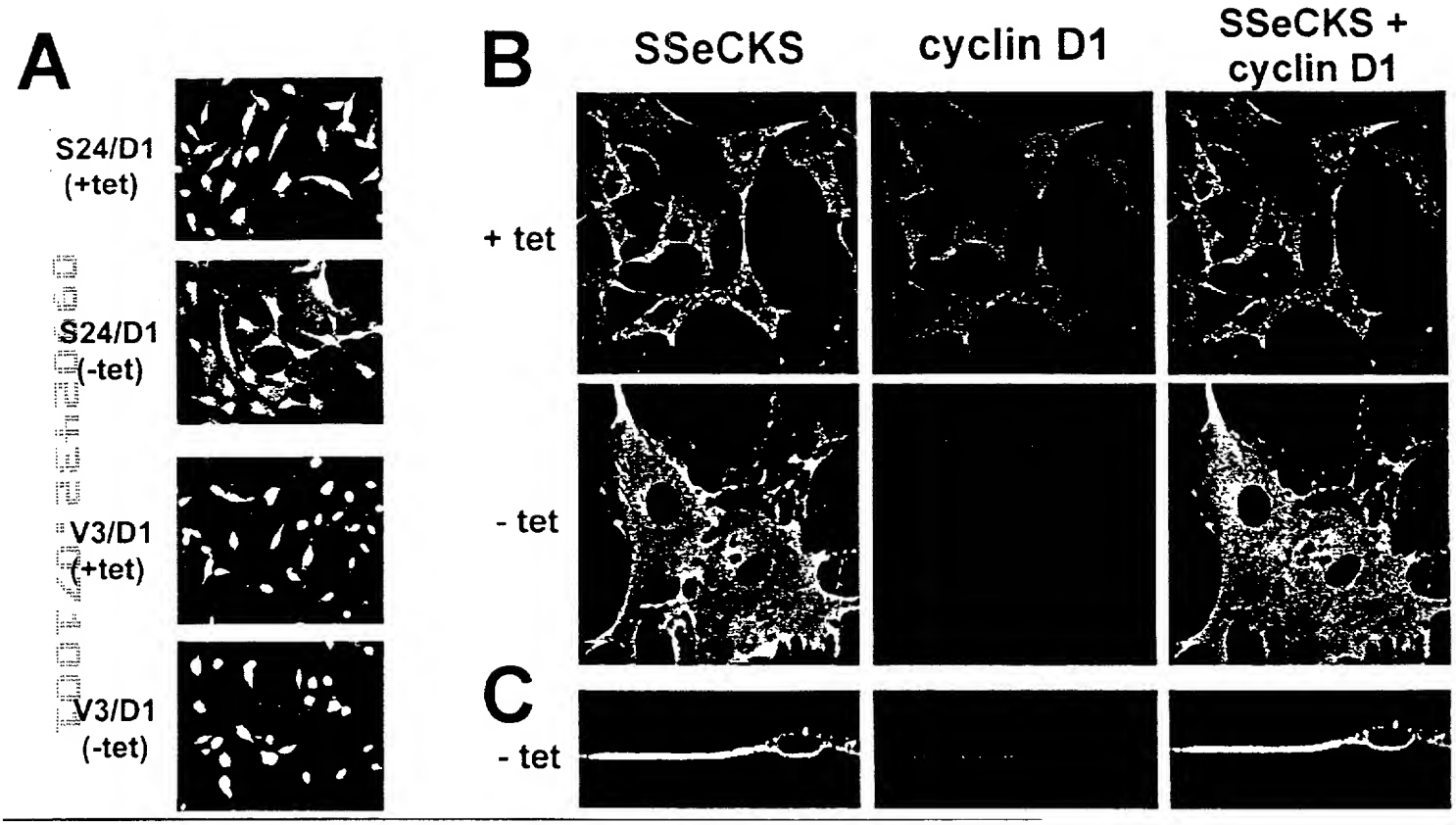

A
S24/D1 (+tet)
S24/D1 (-tet)
V3/D1 (+tet)
V3/D1 (-tet)
B
SSeCKS
cyclin D1
SSeCKS + cyclin D1
+ tet
- tet
C
- tet

Figure 56

(86 of 90)

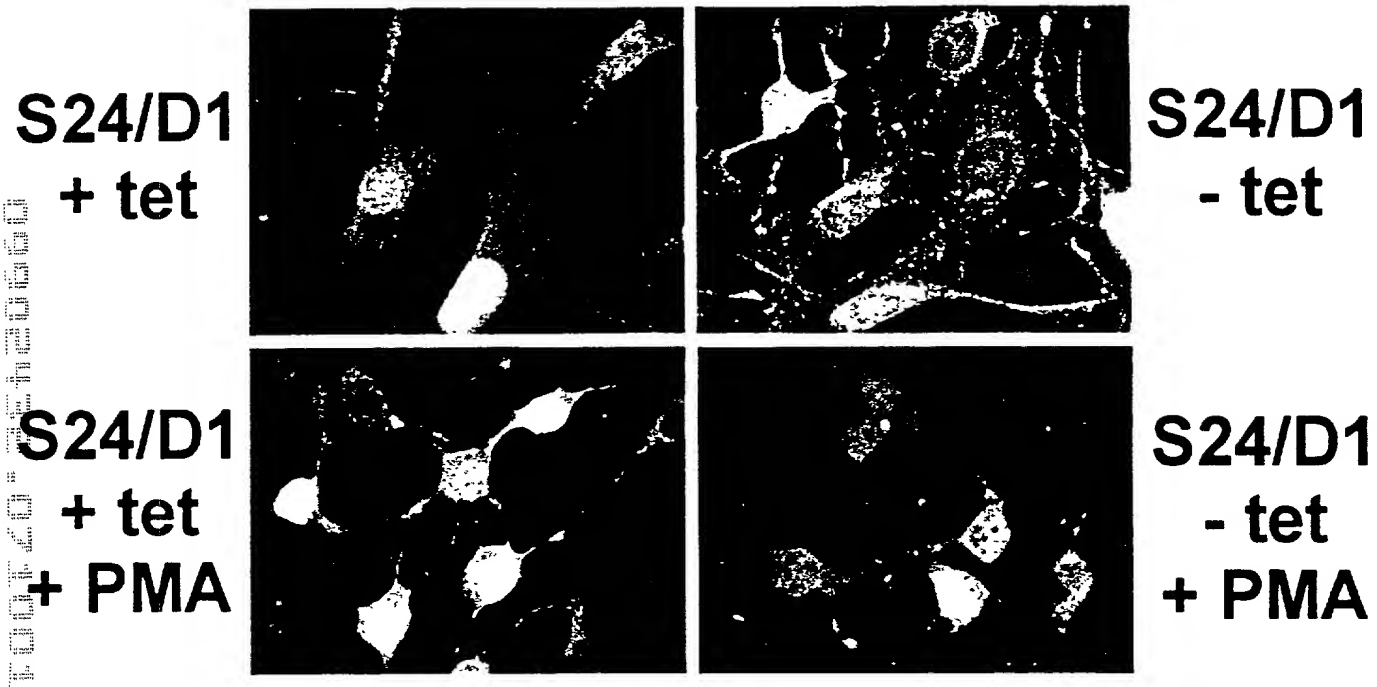


Figure 57

(87 of 90)

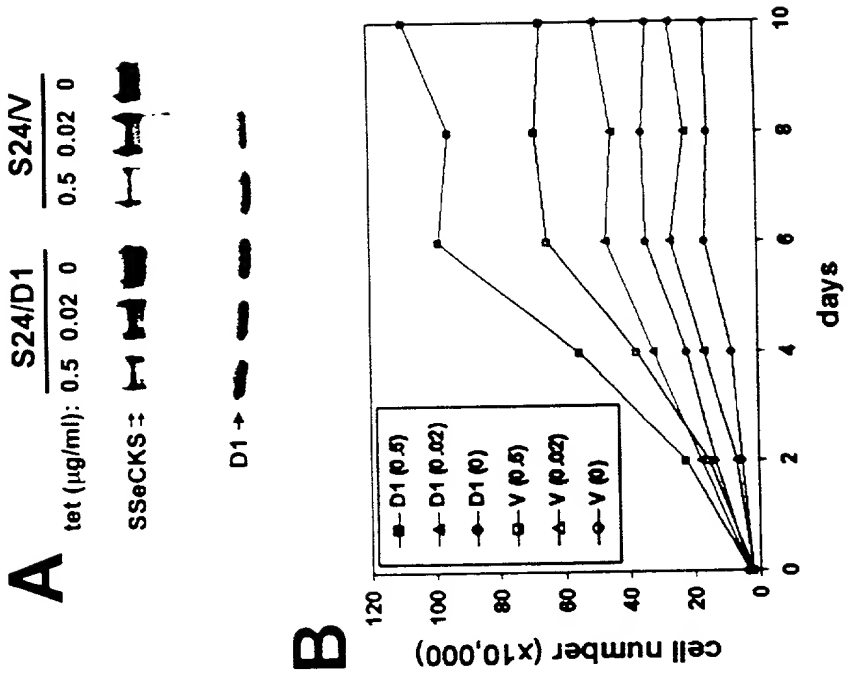


Figure 58

(88 of 90)

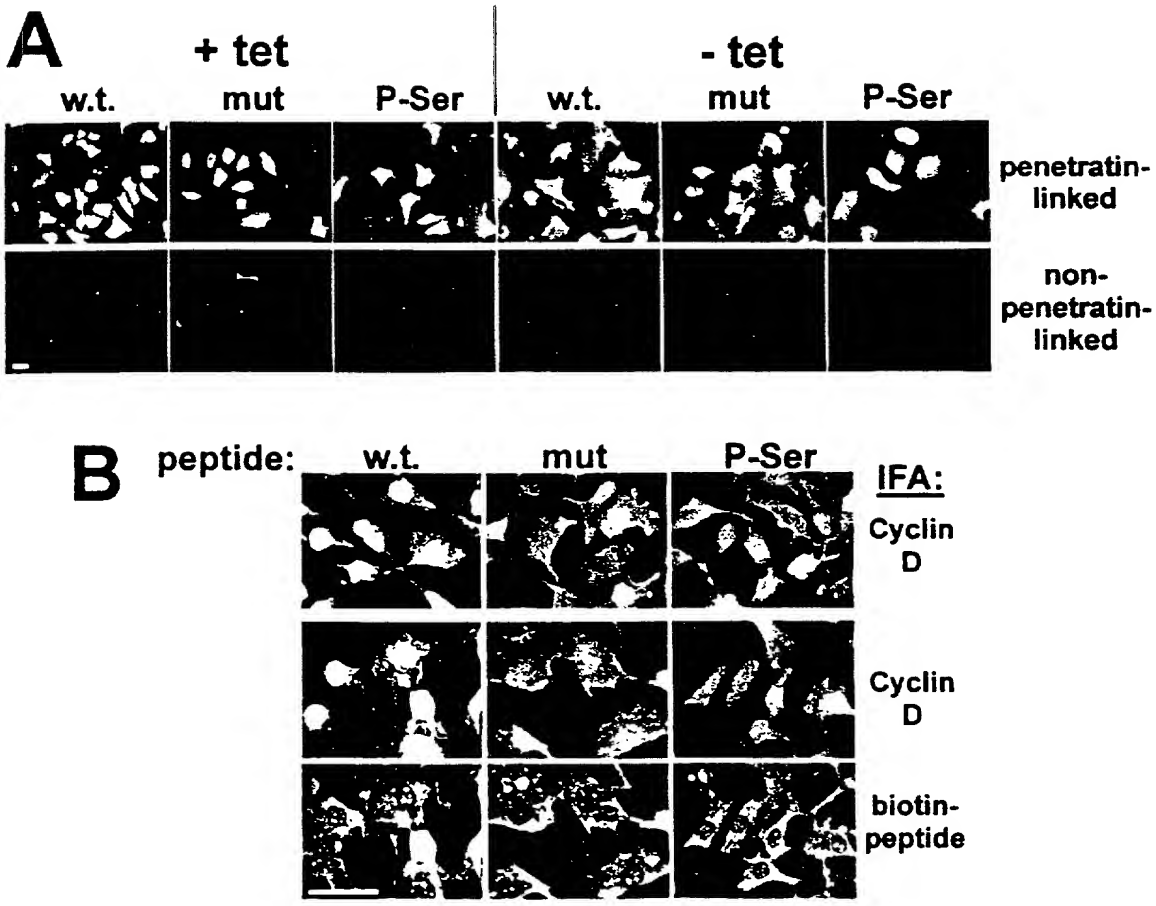


Figure 59

(89 of 90)

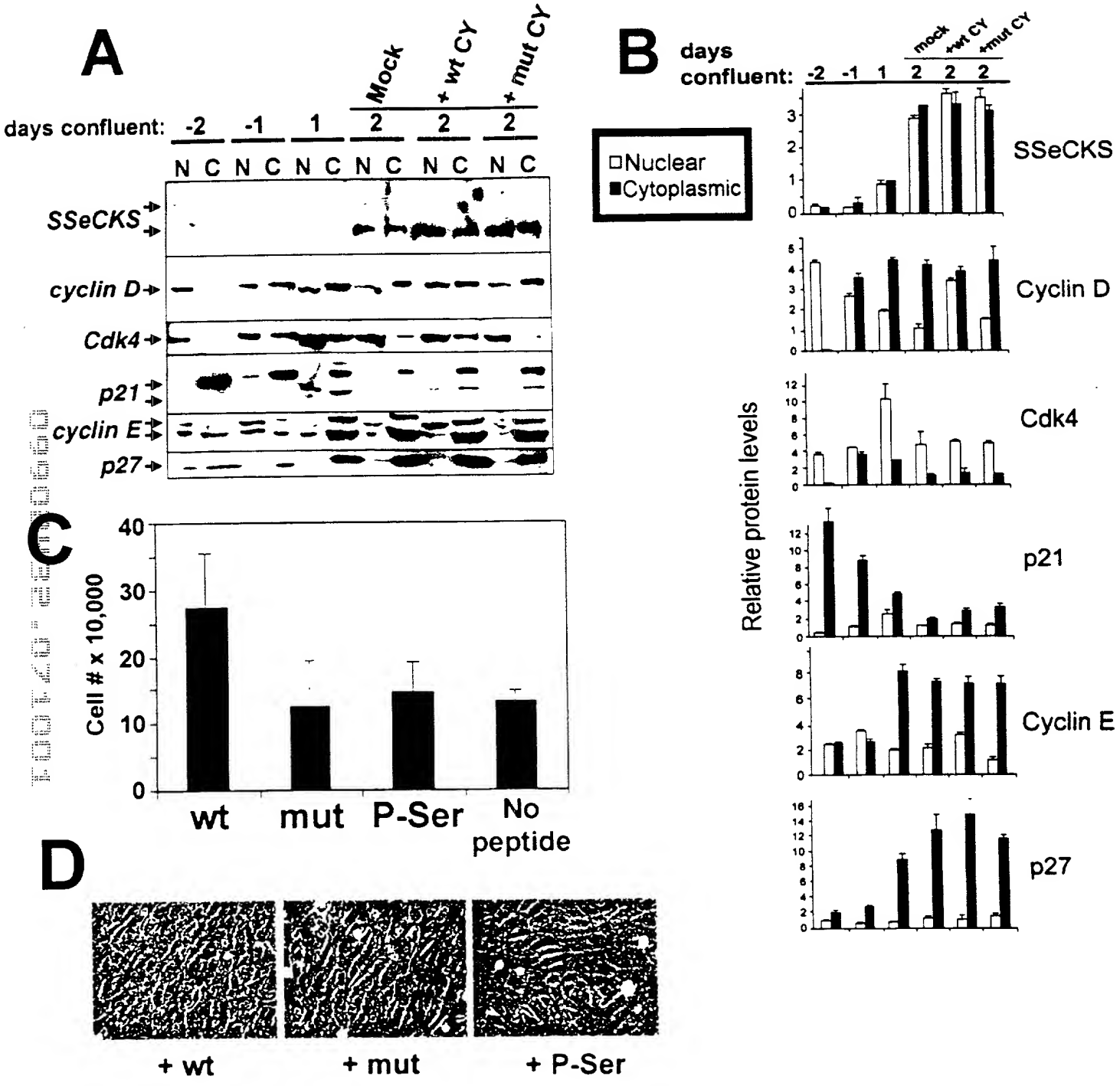


Figure 60
(90 of 90)